PART A

IONOSPHERIC DATA

ISSUED
DECEMBER 1960

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

CRPL-F196
PART A

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Issued
22 Dec. 1960

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CONTENTS

SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, and continuing through December 1956, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1957, the symbols used are given in NBS Report 5033, "Summary of Changes in Ionospheric Vertical Soundings, Observing and Scaling Procedures - Effective 1 January 1957," which draws upon the First Report of the Special Committee on World-Wide Ionospheric Soundings (URSI/AGI), Brussels, Sept. 2, 1956. A list of these symbols is available upon request.

In the Second Report of the Special Committee on World-Wide Ionospheric Soundings of the URSI/AGI Committee, May 1957, a new descriptive letter was introduced:

M Measurement questionable because the ordinary and extraordinary components are not distinguishable.

There was an expansion in meaning of the following:

Z (1) (qualifying letter) Measurement deduced from the third magnetoionic component.
(2) (descriptive letter) Third magnetoionic component present.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given above.

a. For all ionospheric characteristics:

Values missing because of A, C, F, H, L, N or R are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F (and h'E near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the descriptive symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

B for fEs is counted on the low side when there is a numerical value of a higher layer characteristic; otherwise it is omitted from the median count.

S for fEs is counted on the low side at night; during the day it is omitted from the median count (beginning with data for November 1957).

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with CRPL-F188, Part A, issued April 1960, the count is given for foF2 in the tables of medians. It is regretted that space limitations prevent including detailed counts for other characteristics.

To indicate further in a general manner the relative reliability of the data, for the F2 layer, h'F or foEs, if the count is from five to nine, or, for all layers, if more than half of the data used to compute the medians are doubtful (either doubtful or interpolated), the median is enclosed in parentheses. Medians are computed for less than five values for foF2 only.

Ordinarily, a blank space in the fEs or foEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of foE. Blank spaces at the beginning and end of columns of h'F2 or h'F1, foF1, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'F1 and foF1 is usually the result of seasonal effects.

There is no indication on the graphs of the relative reliability of the observed data; it is necessary to consult the tables for such information.

The tables may contain median values of either foEs or fEs. The graph of median Es corresponds to the table. Percentage curves of fEs are estimated from values of foEs when necessary.

The latest available information follows concerning the smoothed observed Zürich numbers beginning with the minimum of April 1954. Final numbers are listed through June 1959.

Smoothed Observed Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40	46	55	64	73	81
1956	89	98	109	119	127	137	146	150	151	156	160	164
1957	170	172	174	181	186	188	191	194	197	200	201	200
1958	199	201	201	197	191	187	185	185	184	182	181	180
1959	179	177	174	169	165	161	156	151	145	140	136	132
1960	128	124	120	118	115							

WORLD-WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 72 and figures 1 to 144 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Republica Argentina, Ministerio de Marina:
Trelew, Argentina

Commonwealth of Australia, Ionospheric Prediction Service of the Commonwealth Observatory:
Brisbane, Australia
Canberra, Australia

Meteorological Service of the Belgian Congo and Ruanda-Urundi:
Bunia, Belgian Congo
Elisabethville, Belgian Congo
Leopoldville, Belgian Congo

Belgian Royal Meteorological Institute:
Dourbes, Belgium
Lwiro (Central African Institute for Scientific Research)

Electronics Directorate of the Brazilian Navy:
Natal, Brazil

British Department of Scientific and Industrial Research, Radio Research Board:
Falkland Is.
Inverness, Scotland
Port Lockroy
Singapore, British Malaya
Slough, England

Defence Research Board, Canada:
Churchill, Canada
Eureka, Canada
Meanook, Canada
Ottawa, Canada
Resolute Bay, Canada
St. John's, Newfoundland
Winnipeg, Canada

Czechoslovak Academy of Sciences:
Pruhonice, Czechoslovakia

General Direction of Posts and Telegraphs, Helsinki, Finland:
Nurmijarvi, Finland

The Finnish Academy of Sciences and Letters:
Sodankyla, Finland

French National Center for Telecommunications Studies:
Casablanca, Morocco
Kerguelen I.
Terre Adelie

Heinrich Hertz Institute, German Academy of Sciences, Berlin:
Juliusruh/Rügen, Germany

The Royal Netherlands Meteorological Institute:
De Bilt, Holland
Hollandia, Netherlands New Guinea

Geophysical and Geodetic Institute, Genoa, Italy:
Genoa (Monte Capellino), Italy

National Institute of Geophysics, City University, Rome, Italy:
Rome, Italy

Ministry of Postal Services, Radio Research Laboratories, Tokyo, Japan:
Akita, Japan
Tokyo (Kokubunji), Japan
Wakkanai, Japan
Yamagawa, Japan

General Directorate of Telecommunications, Mexico:
El Cerillo, Mexico

Telecommunication Administration, Oslo, Norway:
Svalbard, Norway

Institute of Terrestrial Magnetism, Ionosphere and Radio Propagation, Moscow, U.S.S.R.:
Moscow

South African Council for Scientific and Industrial Research:
Capetown, Union of South Africa

Research Institute of National Defence, Stockholm, Sweden:
Kiruna, Sweden
Lycksele, Sweden
Upsala, Sweden

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
Lulea, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Sottens, Switzerland

United States Army Signal Corps:
Adak, Alaska

National Bureau of Standards (Central Radio Propagation Laboratory):
Huancayo, Peru (Instituto Geofisico de Huancayo)
Point Barrow, Alaska
Pole Station, Antarctica
Talara, Peru (Instituto Geofisico de Huancayo)
Washington, D. C.

TABULATIONS OF ELECTRON DENSITY DATA

Reduction of hourly ionospheric vertical soundings to electron density profiles has become a part of the systematic ionospheric data program of the Central Radio Propagation Laboratory, National Bureau of Standards. Scalings of ionograms for this purpose are being provided by ionosphere stations operated by CRPL and the U. S. Army Signal Corps. For the present, the hourly profile data from one CRPL station, Puerto Rico, are appearing in the monthly CRPL-F Reports, Part A. These data are in place of the standard ionogram reductions formerly provided by this Station. The very considerable task of scaling the ionograms for this purpose is being undertaken by T. R. Gilliland, Engineer in Charge, Puerto Rico Ionosphere Sounding Station; the computations are performed at the NBS Boulder Laboratories by a group headed by J. W. Wright. Basic conversion of virtual to true heights uses the well-known matrix method developed by K. G. Budden of the Cavendish Laboratory, Cambridge University, programmed for an IBM 704 computer.

The tabulations provide the following basic electron density profile data for each hour of each day of the month:

Quantity	Units	Remarks
Electron Density (N)	$x10^3$ = electrons/cm^3	Body of table; given at each 10 km of height.
NMAX	$x10^3$ = electrons/cm^3	Always the highest value of N at each hour. To maintain this rule, the electron density at the next 10 km increment above HMAX is always given as exactly equal to NMAX (unless HMAX coincides with a 10 km level).
QUALification	(Alphabetic)	A standard scaling letter qualifying the observation when necessary.
HMIN	Kilometers	The height of zero or very low electron density, obtained by linear extrapolation of the electron density vs. height curve.
SCAT	Kilometers	One half of the half-thickness of the parabola best fitting the upper portion of the F region profile. Approximates the scale height near the level HMAX.
HMAX	Kilometers	The height of maximum electron density, determined by fitting a parabola to the upper portion of the profile.
SHMAX	$x10^{10}$ = electrons/cm^2 column.	Obtained by integration of the profile between the limits HMIN and HMAX.

Tabulations of the average electron densities each hour, at each 10 km level, for the quiet ionosphere, are also given. These averages include the profiles obtained when the magnetic character figure Kp is less than 4+. The number of profiles entering the average for each hour is given by CNT. The other parameters of the layer, HMIN, SCAT, HMAX, SHMAX, are averaged in a similar way.

Before the averaging process, the individual profiles are extrapolated above HMAX by a Chapman distribution of 100 km scale height. This assumed model seems to agree well with the few published measurements dealing with the topside profile of the F-region.* Extrapolation is necessary in order to calculate homogeneous averages near HMAX and the average profiles are, in fact, given up to 950 km. Also given are the average estimated integrated electron densities to infinity, SHINF (same units as SHMAX); this is an approximation to the total electron content in a column of the ionosphere.

*See Wright, J.W. "A Model of the F-Region Above HMAX F2" J.Geophys.Res. V.65 pp 185-191.

ELECTRON DENSITY

PUERTO RICO 60 W 1 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A			
HMIN	290	290	290	289	279	250	219		100	100	100	100
SCAT	37.9	39.0	42.7	41.4	36.5	31.6	24.6		41.3	51.1	85.9	69.6
HMAXF	372	373	376	382	366	316	272		249	261	301	333
SHMAX	284	316	297	297	286	267	247		478	548	828	1025
KM												
390				500								
380	524	573	508	500								
370	523	573	505	490	532							
360	510	558	489	465	529							
350	477	522	458	426	508							
340	426	471	417	374	467							735
330	367	400	356	314	406							735
320	297	324	286	248	339	625						729
310	223	246	219	183	262	620					643	715
300	127	161	143	112	189	584					643	691
290	12.4	12.4	40.2	12.4	97.2	521					640	661
280					12.4	417	794				634	626
270						296	793			599	622	590
260						161	749			599	608	555
250						12.4	643		661	592	586	522
240							417		653	573	564	493
230							143		623	544	535	469
220							12.4		578	502	501	449
210									515	456	462	427
200									440	414	417	402
190									355	375	377	375
180									280	335	340	345
170									231	297	310	315
160									196	256	288	288
150									164	210	264	257
140									136	168	230	221
130									117	140	186	186
120									107	124	158	170
110									99.5	115	145	154
100									12.4	40.2	49.6	12.4

ELECTRON DENSITY

PUERTO RICO 60 W 1 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			S			A	A		S			
HMIN	100	100		100	110	110		220		250	260	290
SCAT	57.0	51.7		49.3	56.8	53.4		47.0		40.9	38.1	45.0
HMAXF	346	336		315	330	333		324		343	347	371
SHMAX	1323	1515		1566	1377	1347		976		639	550	530
KM												
380												896
370												896
360												882
350	1072									1096	982	843
340	1070	1473			1393	1446				1095	974	788
330	1053	1469			1393	1446		1500		1069	927	709
320	1013	1434		1786	1383	1426		1497		1009	855	615
310	963	1365		1781	1352	1382		1466		917	763	508
300	903	1278		1745	1288	1303		1389		814	653	362
290	834	1176		1669	1214	1203		1289		679	523	49.6
280	767	1058		1555	1127	1096		1164		540	389	
270	697	936		1414	1017	960		1004		335	198	
260	625	816		1240	898	834		834		161	12.4	
250	557	697		1050	779	693		622		12.4		
240	500	596		875	643	564		389				
230	453	508		700	533	458		179				
220	417	441		558	441	379		12.4				
210	389	395		458	379	324						
200	370	363		389	335	286						
190	356	342		349	307	260						
180	346	327		321	282	235						
170	336	314		300	254	211						
160	318	301		279	223	189						
150	293	287		255	188	163						
140	262	258		222	164	137						
130	227	221		186	152	123						
120	196	195		169	143	115						
110	170	181		143	12.4	40.2						
100	49.6	112		12.4								

ELECTRON DENSITY

PUERTO RICO 60 W 2 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL					S			A				A
HMIN	289	269	280	269		239	250		110	100	99	99
SCAT	43.8	39.4	38.3	38.8		36.6	34.2		57.6	53.4	64.0	64.1
HMAXF	389	362	371	354		321	309		301	281	343	357
SHMAX	536	485	403	382		446	326		736	751	1176	1398
KM												
390	875											
380	866		716									
370	834	875	716									
360	778	875	702	716								1119
350	702	855	661	714							875	1116
340	608	807	599	692							875	1100
330	499	731	519	647		896					866	1066
320	362	632	429	573		896					848	1023
310	219	508	335	484		875	735		754		816	969
300	112	377	219	377		818	723		754		776	907
290	12.4	219	117	254		732	679		748	814	726	839
280		97.2	12.4	119		617	608		730	813	673	766
270		12.4		12.4		464	508		698	805	621	692
260						262	376		657	778	573	616
250						112	127		608	741	531	547
240						12.4			549	692	494	486
230									484	626	465	438
220									417	540	442	402
210									359	460	426	374
200									310	383	410	351
190									267	330	392	328
180									231	296	371	300
170									198	271	339	270
160									170	251	302	240
150									143	217	274	217
140									120	182	231	198
130									108	152	191	190
120									99.8	136	168	181
110									12.4	119	136	135
100										12.4	12.4	12.4

ELECTRON DENSITY

PUERTO RICO 60 W 2 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	C	A	A			A	A	A			F
HMIN	100				99	110				280	249	249
SCAT	58.8				69.9	57.6				43.7	45.9	50.1
HMAXF	355				347	325				368	341	347
SHMAX	1601				1203	1047				636	515	472
KM												
370										1072		
360	1433									1064		
350	1430				960					1025	854	716
340	1408				958					960	854	712
330	1366				947	1050				875	841	695
320	1297				926	1048				768	805	660
310	1214				893	1032				643	754	614
300	1113				853	1001				477	679	557
290	1004				803	951				219	583	489
280	884				743	890				12.4	459	408
270	769				679	814					310	273
260	661				612	725					143	127
250	565				545	628					12.4	12.4
240	492				484	540						
230	435				431	446						
220	393				387	378						
210	365				352	323						
200	350				325	283						
190	337				302	254						
180	319				283	229						
170	295				262	206						
160	262				242	183						
150	231				219	161						
140	208				187	141						
130	194				163	125						
120	184				150	115						
110	149				117	12.4						
100	12.4				12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 3 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	F	F				F	F	A		A	A	A
HMIN	290		259	289	329	320	300		110			
SCAT	44.2		47.5	54.8	46.3	43.6	45.8		43.9			
HMAXF	375		355	391	418	402	376		276			
SHMAX	416		322	300	266	306	245		519			
KM												
420					432							
410					429	532						
400				424	415	532						
390				424	389	522						
380	697			420	357	496	432					
370	696			407	318	458	430					
360	679		500	391	267	408	417					
350	643		499	367	210	349	396					
340	590		488	335	138	268	365					
330	523		464	286	12.4	143	319					
320	446		430	236		12.4	256					
310	349		389	179			179					
300	240		335	117			40.2					
290	49.6		277	12.4								
280			208						625			
270			117						622			
260			12.4						601			
250									565			
240									516			
230									457			
220									396			
210									335			
200									286			
190									248			
180									216			
170									189			
160									165			
150									142			
140									119			
130									107			
120									99.1			
110									40.2			

ELECTRON DENSITY

PUERTO RICO 60 W 3 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A						A					
HMIN		100	100	100	110	99		230	220	259	280	260
SCAT		43.8	55.8	48.3	65.6	47.1		40.6	44.3	41.9	47.8	48.7
HMAXF		298	315	320	338	323		307	317	367	370	360
SHMAX		1195	1187	1153	1373	1146		625	516	466	414	407
KM												
380											661	
370										735	661	608
360										731	653	608
350										703	628	601
340					1191					657	593	583
330				1119	1186	1290				596	540	549
320			1096	1119	1168	1289			814	525	477	505
310			1094	1107	1134	1267		1191	809	446	396	450
300		1393	1077	1064	1085	1208		1181	780	362	298	383
290		1382	1041	1004	1028	1129		1135	732	274	161	310
280		1334	987	930	964	1025		1050	673	161	12.4	230
270		1246	921	846	894	888		937	603	71.4		143
260		1132	846	754	818	754		794	523	12.4		12.4
250		988	766	665	734	629		573	417			
240		834	679	573	649	520		262	296			
230		679	603	505	566	429		12.4	143			
220		563	532	446	484	362			12.4			
210		472	473	405	412	317						
200		408	425	374	359	286						
190		368	384	349	320	262						
180		342	349	327	291	244						
170		322	318	303	269	225						
160		305	286	279	249	204						
150		288	253	252	222	182						
140		264	226	221	188	165						
130		231	206	191	158	143						
120		197	192	173	140	121						
110		179	182	156	40.2	102						
100		12.4	127	12.4		12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 4 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		F				F			S	A	A	A
HMIN	270	249	249	238	240	219	250	99				
SCAT	40.9	64.2	41.2	44.9	44.4	51.3	40.1	55.0				
HMAXF	365	376	341	336	321	316	321	290				
SHMAX	352	510	398	335	285	251	199	424				
KM												
380		608										
370	625	606										
360	623	598										
350	604	582	697									
340	567	557	697	557								
330	512	526	684	554	500		389					
320	443	489	649	540	500	378	389					
310	362	446	596	512	493	377	382					
300	262	394	522	468	473	369	362	461				
290	143	335	436	409	446	353	332	461				
280	12.4	256	335	335	396	332	288	458				
270		143	211	248	332	303	229	446				
260		71.4	92.4	143	256	265	149	426				
250		12.4	12.4	71.4	152	219	12.4	401				
240				12.4	12.4	161		367				
230						90.2		327				
220						12.4		286				
210								244				
200								207				
190								173				
180								143				
170								119				
160								94.8				
150								77.4				
140								68.6				
130								63.5				
120								57.8				
110								50.9				
100								12.4				

ELECTRON DENSITY

PUERTO RICO 60 W 4 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A			A		A	A	A				
HMIN		100	100	99	99			240	250	260	280	270
SCAT		46.6	55.3	58.0	44.3			43.3	50.8	48.9	45.7	45.6
HMAXF		281	306	333	305			322	359	357	365	359
SHMAX		685	825	1036	979			504	543	462	390	361
KM												
370											643	
360									774	697	641	590
350									768	694	626	584
340				939					746	674	595	563
330				938				896	710	638	550	530
320				927				896	660	594	489	481
310			703	900	1119			880	595	540	412	417
300			701	864	1116			837	513	463	330	344
290		679	689	810	1087			775	425	375	240	262
280		679	661	743	1031			689	330	286	49.6	161
270		670	624	668	950			573	240	179		12.4
260		645	582	585	847			437	137	12.4		
250		602	534	503	735			240	12.4			
240		547	485	429	608			12.4				
230		485	441	375	496							
220		431	404	339	408							
210		389	376	315	353							
200		356	356	301	321							
190		335	342	290	299							
180		323	326	270	280							
170		310	310	242	260							
160		286	292	216	243							
150		252	272	195	219							
140		220	240	181	179							
130		198	203	172	157							
120		187	187	165	144							
110		168	161	127	97.2							
100		40.7	12.4	12.4	12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 5 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	F						S		A	A	A	A
HMIN	300	280	259	259	259	250		199				
SCAT	34.3	44.7	41.9	40.7	40.0	41.2		41.5				
HMAXF	366	365	349	347	343	328		278				
SHMAX	248	292	323	262	255	258		301				
KM												
370	524	492										
360	521	491										
350	495	479	557	461	469							
340	450	452	551	458	468							
330	389	417	527	438	457	484						
320	310	369	490	407	429	479						
310	225	310	439	362	389	458						
300	60.0	240	375	310	335	427						
290		153	302	240	262	377						
280		12.4	219	174	186	310		573				
270			112	97.2	97.2	219		568				
260			12.4	12.4	12.4	127		546				
250						12.4		508				
240								453				
230								362				
220								240				
210								127				
200								12.4				

ELECTRON DENSITY

PUERTO RICO 60 W 5 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			S				A					S
HMIN	100	100		100	100	99	109	239	219	229	290	
SCAT	51.4	64.7		59.2	54.6	53.3	47.0	47.2	48.2	43.1	48.5	
HMAXF	320	324		328	326	322	307	330	325	337	380	
SHMAX	1253	1417		1400	1450	1229	967	729	636	501	441	
KM												
390											697	
380											697	
370											690	
360											664	
350											627	
340								1215		774	577	
330	1215	1290		1316	1500	1303		1215	939	769	508	
320	1215	1289		1309	1496	1302		1202	936	741	417	
310	1205	1275		1283	1469	1285	1191	1160	915	693	318	
300	1172	1246		1240	1410	1245	1184	1096	870	633	198	
290	1112	1194		1169	1341	1175	1151	996	810	558	40.2	
280	1033	1143		1091	1227	1096	1088	868	739	477		
270	942	1064		999	1110	988	1004	700	651	389		
260	843	977		897	977	875	902	446	550	298		
250	746	880		788	834	754	794	179	433	188		
240	651	778		679	686	643	664	12.4	286	97.2		
230	559	670		580	566	534	525		127	12.4		
220	480	563		492	466	440	410		12.4			
210	423	466		424	394	366	321					
200	384	402		375	349	313	257					
190	357	358		339	321	275	210					
180	335	329		314	297	244	179					
170	316	306		294	274	219	156					
160	296	286		271	250	193	138					
150	271	261		242	228	168	122					
140	237	231		210	203	147	107					
130	209	204		183	173	130	94.1					
120	193	188		171	154	119	85.9					
110	182	167		161	138	97.2	12.4					
100	40.2	40.2		12.4	12.4	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 6 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A	A	A	
HMIN	269	259	229	239	259	219	239	98			100	100
SCAT	38.8	52.8	38.9	40.9	39.6	48.7	41.8	51.2			78.3	70.6
HMAXF	356	366	320	332	354	318	312	277			287	344
SHMAX	334	502	363	340	327	326	209	428			910	1352
KM												
370		716										
360	625	714			557							
350	621	700			555							1050
340	595	672		590	537							1049
330	550	632	661	590	500							1039
320	491	581	661	578	451	500	403					1020
310	417	518	651	544	389	497	403					988
300	304	439	616	497	326	484	395					949
290	188	345	563	435	254	458	374				814	896
280	83.8	240	492	362	179	425	345	508			812	837
270	12.4	112	409	278	89.1	381	302	506			804	772
260		12.4	310	189	12.4	325	240	494			788	706
250			179	104		262	143	473			764	643
240			88.3	12.4		188	12.4	442			738	573
230			12.4			97.2		401			706	508
220						12.4		354			661	459
210								303			599	417
200								254			527	385
190								208			446	362
180								169			385	343
170								134			335	323
160								107			294	302
150								88.9			265	276
140								73.8			236	240
130								65.4			196	195
120								58.2			183	174
110								50.4			161	162
100								12.4			71.4	12.4

ELECTRON DENSITY

PUERTO RICO 60 W 6 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A		A	A					
HMIN	100	100	99		99			198	220	224	249	229
SCAT	58.7	54.6	56.1		49.4			37.6	51.3	53.0	51.7	47.7
HMAXF	331	318	318		297			320	361	346	367	355
SHMAX	1427	1351	1311		1030			582	706	647	586	498
KM												
370									939		814	
360									938		810	716
350									927	896	791	714
340	1265								895	893	754	699
330	1265							982	850	875	709	666
320	1254	1316	1290					982	787	843	649	617
310	1218	1309	1283					964	703	797	573	559
300	1169	1280	1255		1191			909	608	726	477	488
290	1109	1227	1202		1185			823	513	637	382	404
280	1028	1151	1143		1155			716	417	540	279	317
270	936	1062	1050		1100			595	310	446	175	230
260	844	960	932		1022			446	209	319	93.4	148
250	754	851	813		917			310	127	190	12.4	83.8
240	669	735	690		779			219	76.9	97.2		49.6
230	584	622	582		634			148	46.8	45.7		6.7
220	508	529	493		508			92.3				
210	452	461	429		412			55.0				
200	412	411	384		348			12.4				
190	382	375	354		307							
180	359	349	332		282							
170	337	328	315		263							
160	315	307	298		245							
150	290	286	279		220							
140	262	262	250		192							
130	231	235	216		167							
120	209	209	192		153							
110	179	179	161		136							
100	12.4	12.4	12.4		12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 7 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	A
HMIN	280	289	249	229	199	209	239	109	99	99		
SCAT	40.8	36.9	38.5	39.3	36.5	47.2	43.3	62.0	66.4	52.1		
HMAXF	367	377	336	320	267	295	309	273	268	269		
SHMAX	322	323	337	366	234	206	144	441	494	609		
KM												
380		590										
370	565	585										
360	561	556										
350	540	508										
340	500	446	625									
330	446	373	622	670								
320	380	294	596	670								
310	303	214	553	658			274					
300	219	117	490	624		342	271					
290	123	12.4	408	573		341	260					
280	40.2		310	494		332	244	508				
270			219	401	508	316	219	508	500	634		
260			112	296	503	295	179	502	498	629		
250			12.4	179	481	262	122	490	491	612		
240				71.4	438	224	12.4	472	478	582		
230				12.4	377	170		449	457	544		
220					277	102		417	433	493		
210					143	12.4		373	404	441		
200					12.4			314	365	395		
190								240	317	356		
180								170	270	322		
170								127	228	294		
160								107	195	264		
150								92.3	169	233		
140								81.8	139	202		
130								76.3	116	165		
120								69.4	106	141		
110								12.4	98.5	129		
100									12.4	12.4		

ELECTRON DENSITY

PUERTO RICO 60 W 7 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		R				S					
HMIN		100		100	103	102		210	249	239	239	290
SCAT		63.2		47.1	47.9	56.8		56.9	50.8	45.7	44.2	52.6
HMAXF		346		311	302	317		333	372	336	343	393
SHMAX		1546		1413	1225	1204		784	711	532	415	390
KM												
400												557
390												556
380									993			548
370									993			527
360									981			499
350		1316							946		652	462
340		1312						960	896	875	651	417
330		1294						960	827	872	637	362
320		1259		1612		1270		948	740	849	608	300
310		1205		1611	1500	1266		922	643	805	562	204
300		1143		1588	1500	1243		879	524	743	501	112
290		1056		1517	1476	1192		824	389	651	431	12.4
280		960		1414	1415	1137		758	262	540	362	
270		856		1289	1341	1057		684	161	417	275	
260		754		1143	1207	960		608	83.8	262	179	
250		650		984	1050	842		522	12.4	112	90.8	
240		565		817	875	716		429		12.4	12.4	
230		497		662	669	591		318				
220		443		525	508	477		186				
210		403		430	402	397		12.4				
200		372		372	340	335						
190		350		335	303	286						
180		332		314	277	252						
170		319		299	254	224						
160		305		286	232	198						
150		286		267	209	173						
140		260		242	184	150						
130		222		214	159	135						
120		196		192	146	122						
110		185		169	129	97.2						
100		143		12.4								

ELECTRON DENSITY

PUERTO RICO 60 W 8 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL					A						R	
HMIN	241	254	247	240	214	254	237	108	109	108		109
SCAT	52.7	53.8	52.0	50.3	63.2	49.5	57.8	52.5	46.2	62.6		76.4
HMAXF	376	369	369	357	339	366	348	271	268	306		375
SHMAX	452	460	437	413	419	317	402	484	540	828		1648
KM												
380	608											1143
370	606	652	608			469						1142
360	594	647	603	608		468						1132
350	571	631	588	605		457	565					1112
340	538	604	560	591	524	436	563					1080
330	492	566	523	565	521	408	552					1037
320	436	516	473	531	512	369	532					990
310	370	446	408	477	496	320	510			745		941
300	296	362	335	406	479	262	474			743		888
290	219	262	258	322	450	194	417			732		834
280	153	170	187	240	408	127	345	643		712		779
270	100	97.2	118	161	357	75.5	252	643	670	684		723
260	63.3	45.9	63.7	90.4	291	40.2	143	636	665	643		666
250	40.2		19.9	49.6	213		71.4	617	643	595		611
240					143		20.3	586	608	543		553
230					78.0			547	554	487		494
220					40.2			487	490	437		442
210								389	417	397		401
200								286	346	362		368
190								210	291	331		345
180								161	250	300		329
170								122	214	266		316
160								94.3	179	233		299
150								78.8	146	202		277
140								70.2	125	172		251
130								66.3	110	148		207
120								62.3	103	136		185
110								40.2	71.4	112		127

ELECTRON DENSITY

PUERTO RICO 60 W 8 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A			A	A	A	A				C
HMIN	109		109	107	110		109		224	196	209	
SCAT	75.3		73.9	53.0	62.3		56.1		45.4	55.5	63.8	
HMAXF	370		371	343	333		333		344	336	387	
SHMAX	2005		2038	1727	1614		1412		778	865	731	
KM												
390											794	
380	1612		1640								791	
370	1612		1640								780	
360	1605		1630								758	
350	1584		1605	1786						1191		723
340	1547		1565	1784	1612		1669			1189	1131	682
330	1492		1507	1757	1611		1668			1163	1128	635
320	1433		1446	1698	1595		1647			1109	1108	578
310	1359		1357	1602	1559		1600			1024	1067	512
300	1266		1256	1483	1495		1524			917	1013	435
290	1156		1129	1330	1423		1430			794	936	356
280	1027		1004	1172	1326		1303			652	834	270
270	896		875	1004	1210		1159			477	716	198
260	772		762	819	1096		980			301	584	147
250	649		658	654	938		774			161	446	110
240	550		567	531	767		564			83.8	310	79.9
230	477		493	446	608		406			40.2	198	57.6
220	425		435	389	462		286				116	40.2
210	387		394	359	372		219				67.6	5.0
200	362		364	337	325		181				26.8	
190	341		343	325	296		152					
180	327		326	313	274		127					
170	315		311	295	252		104					
160	297		288	275	226		83.8					
150	273		257	253	195		73.6					
140	248		231	224	172		68.8					
130	219		214	198	157		65.3					
120	204		203	186	148		61.9					
110	127		143	143	40.2		49.6					

ELECTRON DENSITY

PUERTO RICO 60 W 9 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL							F	A		A	A	A
HMIN	237	188	220	318	320	278	206		106			
SCAT	46.1	38.6	51.8	61.2	52.0	48.8	49.4		42.0			
HMAXF	343	282	326	452	434	385	292		246			
SHMAX	438	356	321	330	313	354	351		442			
KM												
460				396								
450				396								
440				392	439							
430				380	438							
420				366	431							
410				347	415							
400				323	390							
390				291	359	532						
380				253	320	531						
370				212	273	520						
360				169	219	497						
350	707			127	161	464						
340	706			83.8	103	421						
330	692		477	51.7	54.8	362						
320	660		475	12.4		293						
310	615		466			219						
300	550		448			147	599					
290	459	679	421			78.7	599					
280	354	679	385			21.2	590					
270	240	663	339				568					
260	137	625	281				540					
250	71.4	567	198				491		643			
240	19.9	477	112				417		640			
230		354	54.8				286		620			
220		219					143		583			
210		120					45.6		528			
200		63.1							446			
190		12.4							341			
180									262			
170									212			
160									183			
150									148			
140									123			
130									109			
120									104			
110									98.1			

ELECTRON DENSITY

PUERTO RICO 60 W 9 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	A	A							
HMIN	104					109	110	229	199	212	269	256
SCAT	88.5					64.7	56.2	51.2	61.6	56.7	60.0	78.9
HMAXF	332					321	311	315	369	372	418	442
SHMAX	1102					983	823	425	553	526	490	594
KM												
450												557
440												557
430												553
420											573	546
410											571	532
400											561	516
390											543	496
380										625	514	472
370									608	625	481	440
360									605	619	441	402
350									594	601	392	357
340	814								575	575	335	310
330	813					939			548	540	281	255
320	810					938	906	697	513	496	219	202
310	801					931	906	696	470	443	164	154
300	785					912	898	683	421	385	112	115
290	764					882	875	656	367	322	71.4	85.5
280	742					842	836	619	310	257	47.3	62.3
270	716					790	785	563	252	198	7.3	45.2
260	679					716	720	484	201	146		16.0
250	623					630	643	362	155	109		
240	565					532	560	188	115	77.1		
230	493					437	467	12.4	83.8	54.1		
220	421					362	374		58.4	32.2		
210	381					310	293		41.4			
200	350					278	231		4.7			
190	330					257	191					
180	314					240	163					
170	307					222	140					
160	293					203	121					
150	274					182	104					
140	240					161	91.0					
130	194					143	81.5					
120	175					133	75.2					
110	164					97.2	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 10 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												A
HMIN	237	194	208	218	222	246	215	114	109	109	109	
SCAT	61.6	49.5	66.8	53.1	66.1	64.7	72.2	36.2	50.2	69.3	70.0	
HMAXF	381	305	336	341	370	388	385	268	262	300	309	
SHMAX	460	380	304	219	235	197	257	445	531	755	831	
KM												
390	565					219	251					
380	565				257	218	251					
370	561				257	214	248					
360	549				255	208	244					
350	528			292	251	199	236					
340	504		355	292	244	188	226					
330	468		354	289	233	176	216					
320	425		350	278	222	159	201					
310	362	590	341	265	206	138	183			625	661	
300	286	589	329	247	186	116	163			625	658	
290	206	577	315	224	162	93.8	141			622	649	
280	148	553	296	196	136	73.8	120			611	630	
270	102	521	269	163	110	56.3	97.2	754	634	593	608	
260	68.8	465	235	131	85.4	42.2	78.5	746	634	571	579	
250	46.7	389	195	99.0	64.6	12.4	62.8	709	625	540	544	
240	12.4	293	150	69.0	47.9		49.6	649	603	508	505	
230		198	101	46.0	25.3		38.0	523	571	470	466	
220		117	57.9	7.7			12.4	371	523	434	430	
210		67.3	12.4					255	459	402	399	
200		40.9						194	389	373	374	
190								161	335	349	353	
180								132	297	326	334	
170								109	257	302	314	
160								93.2	210	273	290	
150								82.6	167	234	262	
140								77.5	137	206	226	
130								72.4	123	174	194	
120								60.0	114	151	170	
110									60.0	127	127	

ELECTRON DENSITY

PUERTO RICO 60 W 10 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	A			A	S				A	
HMIN	107			107	109			198	190	216	227	227
SCAT	62.0			72.6	67.2			58.9	56.5	61.9	47.8	55.6
HMAXF	348			349	368			317	364	377	366	380
SHMAX	1362			1605	1488			610	622	641	446	491
KM												
390												608
380										745		608
370					1191				716	742	634	602
360					1187				716	731	632	587
350	1119			1316	1170				706	708	617	561
340	1114			1310	1139				685	679	587	528
330	1096			1292	1096				651	638	545	483
320	1059			1261	1039			774	608	586	488	429
310	1011			1215	970			771	556	522	417	365
300	948			1161	895			758	495	446	339	293
290	875			1096	816			731	429	362	255	227
280	801			1014	735			696	362	286	185	172
270	721			926	654			650	301	208	133	127
260	639			829	573			596	240	140	94.2	89.9
250	564			729	504			532	182	94.5	65.8	63.6
240	498			629	446			456	135	66.8	45.5	44.8
230	446			540	401			362	100	46.5	12.4	12.4
220	410			464	366			254	72.8	16.3		
210	383			406	341			112	52.8			
200	362			365	322			26.8	33.5			
190	349			337	306							
180	335			319	291							
170	318			302	272							
160	298			287	245							
150	272			260	208							
140	237			232	176							
130	215			203	159							
120	203			186	150							
110	83.8			112	112							

ELECTRON DENSITY

PUERTO RICO 60 W 11 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	244	271	247	232	184	189	190	109	112	109	109	109
SCAT	61.0	70.5	61.0	53.2	43.9	34.8	59.1	66.5	54.9	65.8	112	93.7
HMAXF	398	433	381	359	288	261	325	283	262	302	387	389
SHMAX	568	537	505	515	349	157	189	400	531	760	1323	1297
KM												
440		565										
430		565										
420		560										
410		550										
400	661	534										
390	658	513	625								754	764
380	647	486	625								754	762
370	624	453	620								750	756
360	596	414	606	670							744	742
350	560	366	582	665							734	726
340	513	310	552	649							722	708
330	455	253	514	618			229				704	686
320	394	188	465	578			229				685	659
310	326	130	403	530			226			634	664	628
300	255	88.4	335	477			219			634	643	594
290	187	60.0	253	417	590		211	417		628	614	558
280	132	40.2	161	342	585		202	417		615	582	521
270	87.0		97.2	262	564	348	185	413	625	592	545	485
260	56.4		57.6	186	533	348	161	405	625	562	505	451
250	27.3		18.7	112	477	340	133	391	617	529	467	420
240				54.5	405	320	107	373	598	495	432	394
230					310	286	83.8	351	573	462	401	373
220					208	219	64.0	324	536	434	376	357
210					121	127	48.5	290	477	409	356	343
200					71.4	66.0	30.3	246	417	386	341	332
190					40.2	12.4		191	345	364	327	322
180								138	283	335	314	312
170								105	243	298	295	299
160								91.5	207	255	274	284
150								83.2	171	219	245	259
140								79.8	143	183	205	227
130								76.3	128	158	177	198
120								72.8	115	146	166	185
110								49.6		83.8	112	127

ELECTRON DENSITY

PUERTO RICO 60 W 11 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL					B					A	A	F
HMIN	10	108	107	106	108	109	107	218	237	231	257	278
SCAT	75.1	98.6	80.9	64.9	74.3	61.7	57.1	64.8	66.8	60.0	53.5	48.7
HMAXF	368	394	363	336	332	336	317	350	394	374	412	414
SHMAX	1173	1360	1145	1006	952	822	691	634	769	692	607	604
KM												
420											754	824
410											754	822
400		794							834		746	806
390		793							833		724	770
380		790							824	834	685	716
370	794	782	774						806	833	638	659
360	791	770	774					774	777	823	581	590
350	782	754	769					774	742	801	518	512
340	766	733	758	794	716	679		769	696	766	446	427
330	740	710	739	792	716	677		754	643	722	369	318
320	704	683	719	782	711	667	716	730	573	665	286	213
310	674	650	692	763	700	648	714	699	501	596	206	134
300	631	611	657	734	682	618	700	657	417	514	143	83.8
290	582	567	614	697	657	581	676	600	335	417	100	51.3
280	52	520	566	648	626	537	640	528	252	335	68.8	12.4
270	477	477	515	592	589	490	594	440	172	248	46.7	
260	42	438	465	531	548	442	540	335	103	161	12.4	
250	38	406	420	472	505	398	477	219	57.6	88.7		
240	360	381	386	421	458	359	409	121	18.5	47.5		
230	344	361	360	380	415	327	350	60.0				
220	334	348	340	352	378	301	297	12.4				
210	330	334	328	332	348	282	249					
200	326	330	317	319	325	266	209					
190	322	324	308	308	306	251	176					
180	318	318	301	299	291	236	148					
170	314	312	294	290	276	219	124					
160	308	300	287	277	261	198	107					
150	286	278	265	259	238	174	93.4					
140	252	236	233	235	213	146	83.5					
130	219	200	201	206	195	127	79.1					
120	203	188	188	189	183	119	74.6					
110	60.0	148	161	161	112	112	49.6					

ELECTRON DENSITY

PUERTO RICO 60 W 12 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S	A			
HMIN	270	231	195	218	256	199	200	108	105	108	109	109
SCAT	56.7	48.5	44.8	55.6	48.9	68.8	54.2	58.0	69.2	59.5	101	125
HMAXF	405	329	302	355	370	395	372	255	311	309	339	358
SHMAX	607	572	376	355	296	381	273	323	653	604	743	879
KM												
410	794											
400	792					368						
390	779					368						
380	754				432	364	310					
370	716				432	355	310					
360	668			446	427	344	306					461
350	602			445	412	332	297					461
340	520			438	390	311	282				439	459
330	426	960		424	359	286	261				438	456
320	324	953		401	319	259	236		548		435	451
310	211	925	616	373	271	229	209		548	500	430	443
300	127	880	616	335	213	198	182		545	497	423	433
290	77.0	810	605	295	161	166	155		534	487	411	422
280	47.1	700	578	249	105	138	130		518	469	397	410
270		550	540	198	60.0	114	107		499	446	381	397
260		335	480	154	24.6	94.4	89.5	389	474	414	365	384
250		153	403	108		77.5	74.2	388	442	379	349	372
240		63.6	310	71.4		63.5	61.1	383	407	345	334	360
230			211	46.1		51.8	50.2	372	369	317	324	351
220			117	7.9		42.3	41.1	355	331	297	313	341
210			66.6			23.4	21.0	335	300	282	307	333
200			31.4			1.4		307	275	272	302	328
190								262	254	262	297	323
180								203	233	244	292	318
170								151	212	221	288	313
160								119	188	197	272	297
150								97.2	162	176	240	270
140								83.8	138	160	208	244
130								78.4	124	153	191	219
120								73.1	117	146	179	203
110								49.6	102	97.2	97.2	71.4

ELECTRON DENSITY

PUERTO RICO 60 W 12 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	S				S	A	A			
HMIN	10		109	109	108	110	198		245	233	259	264
SCAT	99.8		60.9	65.1	69.1	59.8	52.7		55.0	54.2	47.4	66.2
HMAXF	357		311	323	313	314	335		385	377	379	413
SHMAX	1034		828	825	827	724	476		453	429	408	540
KM												
420												608
410												607
400												601
390									573			589
380									572	540	599	569
370									563	538	593	545
360	608								544	527	573	511
350	607								515	508	540	467
340	603						634		477	477	495	417
330	596			625			633		430	438	437	357
320	586		679	625	670	679	622		376	393	368	286
310	573		679	619	670	678	598		317	340	299	210
300	556		674	605	664	670	565		252	282	224	148
290	540		659	585	652	652	520		190	225	147	94.8
280	516		634	558	631	623	460		131	171	89.3	60.0
270	491		602	522	608	586	389		83.8	120	51.6	32.8
260	463		560	477	573	540	310		54.4	83.8	6.3	
250	436		513	433	532	488	228		22.3	55.4		
240	410		467	397	485	430	174			30.5		
230	387		427	367	437	376	132					
220	368		395	347	396	331	88.2					
210	356		372	333	362	299	53.1					
200	347		356	326	335	274	12.4					
190	338		344	319	317	251						
180	327		331	312	300	225						
170	317		312	300	283	194						
160	304		289	286	262	161						
150	287		262	264	242	139						
140	262		226	236	222	126						
130	232		198	198	193	120						
120	207		186	186	171	115						
110	83.8		71.4	83.8	127	49.6						

ELECTRON DENSITY

PUERTO RICO 60 W 13 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL			A	A	A	A	A	A	A	P	A	A
HMIN	274	262	215			208	236					
SCAT	46.5	50.0	52.9			53.5	63.7					
HMAXF	391	373	362			325	363					
SHMAX	403	418	510			450	431					
KM												
400	608											
390	607											
380	598	608										
370	575	607	652				524					
360	537	597	652				524					
350	486	573	644				518					
340	424	540	619				505					
330	348	493	589			625	485					
320	262	435	549			624	461					
310	190	368	500			613	431					
300	112	292	446			588	394					
290	68.1	198	377			556	346					
280	35.9	112	302			513	286					
270		54.1	219			463	219					
260			157			401	127					
250			109			319	68.5					
240			75.1			219	26.8					
230			49.6			120						
220			21.0			60.0						
210						12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 13 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	A		A		A				
HMIN				109	111		108	198	208	228	250	268
SCAT				69.1	79.5		78.5	67.7	66.5	75.7	59.2	49.0
HMAXF				358	357		340	367	376	411	397	385
SHMAX				2084	2031		1421	1131	955	1064	860	696
KM												
420										1050		
410										1050		
400										1044	1050	
390										1030	1046	1027
380									1016	1006	1029	1024
370								1167	1014	971	995	1001
360				1786	1712			1163	999	931	946	957
350				1779	1709		1277	1148	970	880	886	892
340				1754	1693		1277	1117	935	815	810	806
330				1710	1662		1272	1077	892	735	716	698
320				1644	1615		1257	1023	837	643	601	573
310				1564	1568		1228	960	768	540	490	433
300				1464	1500		1189	892	688	446	375	286
290				1341	1416		1151	809	598	341	251	161
280				1218	1306		1096	716	508	240	148	78.5
270				1096	1165		1018	617	411	170	86.8	22.3
260				960	1022		928	508	310	112	49.6	
250				826	875		827	397	219	71.4		
240				716	723		716	276	137	46.5		
230				608	590		592	174	83.8	7.6		
220				521	477		471	102	49.6			
210				451	405		366	57.1	12.4			
200				398	357		286	12.4				
190				358	327		229					
180				330	303		190					
170				309	278		161					
160				269	251		138					
150				237	221		120					
140				213	190		106					
130				196	173		94.4					
120				186	162		86.7					
110				143			60.0					

ELECTRON DENSITY

PUERTO RICO 60 W 14 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL			A	A			A	A				
HMIN	233	237	235	208	241	229	202		109	109	109	107
SCAT	48.0	49.4	50.7	61.8	42.8	44.1	49.1		51.6	73.7	71.3	62.9
HMAXF	363	365	357	347	361	341	319		296	329	343	340
SHMAX	624	590	589	522	398	393	412		975	1436	1738	1839
KM												
370	906	844			625							
360	906	843	844		625							
350	890	827	840	616	614	634					1420	1612
340	851	794	815	614	582	634					1419	1612
330	798	737	780	603	540	624				1191	1408	1601
320	724	668	728	582	481	597	616			1187	1382	1570
310	630	584	662	558	410	558	611			1172	1341	1507
300	522	477	573	526	326	497	590		1072	1145	1284	1434
290	408	369	477	484	240	417	561		1069	1105	1218	1341
280	286	262	352	436	171	330	520		1044	1058	1136	1240
270	179	170	232	380	105	240	464		947	1004	1050	1119
260	112	100	134	317	66.6	149	389		937	936	966	1004
250	68.5	60.0	71.4	245	43.1	88.2	302		861	862	875	895
240	40.3	18.7	33.1	169		49.6	206		772	783	784	788
230				97.2		6.7	127		679	700	696	687
220				56.4			74.2		581	617	613	602
210				12.4			43.2		492	540	540	537
200									417	477	480	488
190									351	427	427	446
180									297	380	380	410
170									250	335	339	375
160									211	289	302	342
150									179	248	266	308
140									157	213	237	273
130									141	184	216	238
120									131	167	203	212
110									60.0	112	49.6	161

ELECTRON DENSITY

PUERTO RICO 60 W 14 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	104	108	109	109	110	110	111	219	199	203	266	275
SCAT	59.9	66.8	61.5	58.4	62.9	75.5	60.0	53.9	61.6	52.6	46.9	51.0
HMAXF	361	342	361	352	372	384	344	344	359	372	382	413
SHMAX	2160	1949	1993	1892	1744	2083	1454	1082	1083	850	682	645
KM												
420												865
410												864
400												850
390						1683					1027	818
380					1473	1682				1016	1026	773
370	1937		1741		1473	1669				1015	1009	707
360	1937		1741	1727	1461	1625			1191	1002	963	628
350	1922	1683	1727	1726	1418	1581	1514	1500	1185	965	901	540
340	1869	1683	1690	1709	1356	1527	1512	1498	1163	917	821	446
330	1800	1670	1620	1669	1282	1459	1493	1473	1124	858	716	352
320	1704	1620	1533	1584	1205	1378	1453	1417	1069	786	593	255
310	1588	1568	1431	1491	1124	1280	1382	1341	1004	703	454	161
300	1446	1501	1315	1382	1026	1161	1297	1240	917	608	310	103
290	1307	1424	1178	1257	917	1034	1197	1117	834	517	179	60.0
280	1130	1327	1034	1136	804	908	1085	960	735	425	88.0	29.4
270	982	1217	897	1004	691	794	953	769	634	330	40.2	
260	846	1098	771	875	598	679	804	540	529	247		
250	724	991	663	746	531	573	656	310	427	175		
240	628	875	578	637	480	492	526	154	327	119		
230	561	761	516	552	443	433	417	71.4	219	81.5		
220	512	643	474	489	414	389	335	12.4	127	55.8		
210	479	549	445	444	392	354	277		63.8	30.5		
200	450	477	425	412	371	325	236		12.4			
190	422	431	407	386	346	297	203					
180	394	393	391	359	315	269	175					
170	367	362	367	333	282	243	151					
160	338	337	338	306	248	217	130					
150	302	312	310	276	216	192	113					
140	257	276	274	246	186	167	98.4					
130	219	229	227	211	159	147	90.7					
120	203	208	206	188	149	133	83.8					
110	60.0	161	49.6	71.4	40.2	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 15 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL					A			A	A			
HMIN	284	254	224	225	198	216	256			108	107	108
SCAT	47.3	48.1	50.3	42.8	45.3	66.6	63.7			88.3	112	81.2
HMAXF	412	372	333	323	314	346	404			356	394	352
SHMAX	608	562	590	433	407	348	359			1105	1414	1235
KM												
420	885											
410	885						410					
400	867						410				774	
390	829						405				774	
380	780	854					396				771	
370	711	854					380				765	
360	629	840					363			764	757	854
350	517	808				403	338			763	740	854
340	406	760	928			402	306			758	722	850
330	297	686	927	764		397	267			744	703	839
320	192	590	909	763	634	387	226			725	682	819
310	112	477	878	742	633	371	183			703	661	796
300	65.2	354	827	706	620	353	137			679	640	767
290	35.0	234	748	647	589	332	97.2			654	620	730
280		134	643	560	546	304	67.9			626	599	687
270		71.4	499	446	486	271	47.3			590	577	639
260		40.2	327	318	417	231	16.5			548	549	586
250			172	161	335	184				500	516	534
240			83.8	77.4	240	127				446	477	486
230			40.2	34.0	150	71.4				397	438	446
220					89.9	28.2				354	403	417
210					53.1					325	375	396
200					12.4					306	356	382
190										295	343	372
180										283	327	362
170										267	310	343
160										246	287	318
150										216	251	289
140										184	198	250
130										159	176	198
120										148	166	186
110										83.8	71.4	71.4

ELECTRON DENSITY

PUERTO RICO 60 W 15 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	109	108	107	108	108	109	115	230	201	253	287	245
SCAT	87.7	89.4	69.9	75.9	73.1	53.9	46.6	41.4	70.7	58.3	50.6	48.1
HMAXF	358	367	345	352	346	320	307	312	383	423	430	396
SHMAX	1298	1489	1302	1224	1228	925	702	375	476	395	334	336
KM												
440											432	
430										439	432	
420										439	428	
410										433	415	
400										422	391	439
390									461	402	363	437
380									461	377	329	426
370		971							457	347	289	403
360	844	970		896					449	313	244	373
350	842	962	982	896	971				433	274	198	335
340	835	943	981	890	970				416	235	155	294
330	818	923	970	877	960	896			394	198	120	247
320	800	898	945	851	937	896		697	368	163	87.0	205
310	777	870	911	823	911	888	896	697	338	130	62.4	165
300	751	834	875	790	875	861	891	684	305	99.9	43.9	129
290	716	787	828	745	830	820	863	647	268	76.6	12.4	99.2
280	675	734	774	692	776	769	819	595	230	58.7		75.0
270	626	675	716	630	712	705	754	520	193	45.0		56.8
260	573	615	656	567	639	631	669	417	158	21.5		43.0
250	522	554	595	508	565	553	565	286	127			15.6
240	477	505	540	459	495	477	455	127	95.6			
230	441	465	491	417	435	417	351		70.3			
220	414	436	451	389	389	368	271		50.7			
210	397	415	420	370	360	332	219		30.0			
200	385	401	397	357	339	305	186					
190	378	387	378	347	322	282	157					
180	371	375	360	338	306	258	131					
170	364	362	340	321	287	233	106					
160	347	341	316	297	260	208	90.2					
150	320	317	284	262	231	183	82.3					
140	288	290	245	225	203	160	78.9					
130	256	257	215	197	177	141	75.5					
120	230	229	202	184	162	131	72.1					
110	97.2	179	83.8	60.0	71.4	71.4						

ELECTRON DENSITY

PUERTO RICO 60 W 16 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S				
HMIN	266	240	237	216	234	241	260		108	107	108	108
SCAT	47.8	56.0	51.9	64.9	45.7	59.6	39.6		40.5	98.2	64.5	93.1
HMAXF	378	377	356	371	350	375	339		253	318	321	383
SHMAX	270	309	286	327	219	234	170		541	1047	1154	1885
KM												
390												1191
380	410	396		368		280						1191
370	407	394		368		279						1185
360	396	385	396	366	329	275						1173
350	373	370	395	358	329	267						1154
340	344	352	386	346	325	254	323					1126
330	308	327	370	334	313	240	319				971	1096
320	265	290	350	315	293	220	304			764	971	1055
310	217	247	319	288	266	196	282			763	964	1010
300	166	198	280	253	230	169	246			758	941	956
290	10-	151	236	212	190	140	202			746	917	899
280	65.5	112	188	171	149	112	151			732	871	841
270	25.1	79.9	139	133	112	83.8	71.4			718	818	781
260		56.8	91.1	102	76.7	62.2			745	697	754	721
250		40.2	55.5	77.1	51.9	40.2			744	674	686	664
240			18.1	56.9	25.2				726	643	614	610
230				42.0					688	611	547	561
220				12.4					623	573	491	518
210									533	523	449	480
200									438	472	417	446
190									354	420	393	419
180									296	372	372	394
170									256	330	348	367
160									224	291	319	340
150									194	250	284	310
140									161	215	248	276
130									141	188	208	242
120									130	170	188	212
110									83.8	127	143	161

ELECTRON DENSITY

PUERTO RICO 60 W 16 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A										A	
HMIN	109	108	108	109	110	110	109	197	235	249	318	328
SCAT	71.6	71.9	69.8	76.0	48.1	63.9	67.2	49.1	55.5	57.1	57.4	58.4
HMAXF	385	404	425	399	352	347	354	357	376	397	462	477
SHMAX	2001	2289	2326	2681	1722	1593	1284	835	792	853	815	852
KM												
480												1016
470											993	1012
460											993	988
450											982	954
440											956	911
430			1612								917	850
420			1610								859	776
410		1612	1593								794	686
400		1610	1561	2128						1016	703	589
390	1460	1597	1503	2120						1012	614	487
380	1458	1567	1441	2093					982	988	519	383
370	1442	1512	1357	2048					980	953	417	286
360	1396	1451	1262	1979	1815		1167	1072	963	906	302	188
350	1350	1373	1179	1907	1815	1500	1166	1068	926	843	204	112
340	1287	1287	1096	1804	1786	1496	1154	1039	878	769	116	60.0
330	1222	1194	990	1683	1680	1474	1124	987	818	685	60.0	12.4
320	1157	1096	890	1539	1580	1430	1085	923	744	594	12.4	
310	1078	1004	794	1379	1462	1369	1036	847	660	494		
300	992	906	712	1211	1321	1295	980	754	564	389		
290	904	816	643	1050	1178	1203	917	643	463	296		
280	815	734	579	875	1019	1096	845	540	362	198		
270	728	664	528	730	845	971	765	429	249	112		
260	649	604	488	613	691	834	679	322	152	60.0		
250	582	555	457	529	564	702	592	230	83.8	44.9		
240	527	516	434	471	477	583	508	161	35.0			
230	485	487	415	434	421	481	417	112				
220	451	465	401	409	386	410	335	73.9				
210	425	445	388	389	360	362	262	48.5				
200	406	428	382	372	340	327	209	12.4				
190	389	411	375	354	318	292	170					
180	380	396	368	335	294	259	139					
170	372	378	360	313	265	228	115					
160	363	356	334	286	228	198	95.6					
150	340	325	303	257	192	173	85.3					
140	306	292	275	225	168	150	80.7					
130	265	262	252	198	155	138	77.2					
120	233	235	231	187	147	129	73.6					
110	60.0	161	161	97.2	49.6	12.4	49.6					

ELECTRON DENSITY

PUERTO RICO 60 W 17 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL						A	A		A	A		
HMIN	329	230	314	293	228	231	286		109	110	107	106
SCAT	55.0	38.8	63.5	80.4	55.5	68.6	81.0		77.8	47.9	82.1	78.8
HMAXF	477	314	499	477	335	446	512		362	314	332	361
SHMAX	793	695	619	805	457	580	519		1178	1090	1279	1372
KM												
520							432					
510							432					
500			625				429					
490			622				423					
480	987		611	764			413					
470	978		589	763			400					
460	956		563	756			386					
450	917		531	743		516	368					
440	866		493	724		515	345					
430	802		449	700		509	319					
420	725		405	674		495	291					
410	632		357	635		480	260					
400	532		310	584		458	228					
390	432		262	524		430	198					
380	329		216	458		405	169					
370	231		171	389		382	142		844			896
360	143		127	310		348	119		844			896
350	86.6		93.8	228		314	98.3		839			892
340	51.3		68.4	158	661	274	81.1		823		928	880
330	6.6		48.3	107	659	237	66.7		800		928	858
320		1393	23.5	75.2	648	202	54.6		774	1155	922	832
310		1389		52.6	625	170	44.9		745	1153	907	801
300		1347		28.6	595	138	30.0		712	1126	887	762
290		1258			551	112	8.0		677	1079	862	719
280		1128			490	88.3			635	1012	830	675
270		917			403	70.0			590	917	794	630
260		643			302	55.6			540	794	752	587
250		310			179	43.3			493	679	704	549
240		97.3			83.8	22.5			446	573	655	517
230					22.3				406	495	608	491
220									371	436	559	469
210									342	392	516	450
200									317	362	477	429
190									293	335	439	408
180									271	313	402	389
170									246	289	365	369
160									219	262	327	343
150									191	236	291	310
140									164	208	257	273
130									143	182	228	234
120									129	163	207	210
110									60.0	12.4	143	179

ELECTRON DENSITY

PUERTO RICO 60 W 17 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A	A	A						
HMIN	108	107	109	109		109	109	209	218	238	259	263
SCAT	64.0	59.0	74.9	64.8		54.9	64.4	54.0	58.8	52.2	60.2	58.5
HMAXF	343	330	358	365		331	350	352	368	406	419	409
SHMAX	161	162	1697	1493		1273	1267	817	638	531	507	481
KM												
420											582	
410										634	579	565
400										632	565	562
390										618	547	551
380										591	522	529
370				1119					735	554	486	500
360			1265	1118			1191	1027	732	508	438	465
350	1354		1261	1105			1191	1026	718	456	385	426
340	1353	1500	1246	1073		1252	1184	1013	689	400	330	381
330	1341	1500	1209	1033		1252	1162	977	654	344	275	331
320	1295	148	1168	983		1240	1125	928	611	289	222	275
310	1253	145	1123	923		1194	1076	868	562	237	169	219
300	118	138	1070	855		1148	1011	794	503	188	122	161
290	111	1310	1004	785		1077	936	703	440	135	83.8	104
280	1033	1217	932	716		993	849	608	373	97.3	58.8	66.7
270	928	1110	855	643		891	754	508	305	74.0	41.7	40.2
260	823	987	779	579		794	666	389	231	53.8	4.5	
250	72	845	705	526		691	573	275	161	40.2		
240	643	711	636	483		599	492	179	103	5.8		
230	577	600	573	440		516	412	105	56.6			
220	526	543	524	424		446	341	57.8	12.4			
210	486	495	487	404		389	286	4.9				
200	456	455	446	386		340	236					
190	420	420	413	372		301	194					
180	403	395	387	356		267	159					
170	373	374	353	338		236	134					
160	343	358	321	315		210	113					
150	313	330	283	291		186	97.3					
140	281	295	251	262		165	86.7					
130	250	261	223	234		146	79.6					
120	227	230	208	211		133	73.9					
110	143	179	127	97.2		60.0	40.2					

ELECTRON DENSITY

PUERTO RICO 60 W 18 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A			A			A			A	
HMIN	244	227	237	196	232	238	252		108	107	107	106
SCAT	64.1	53.7	63.3	67.2	66.5	73.9	60.3		83.6	189	169	174
HMAXF	411	355	378	356	407	414	380		339	364	326	400
SHMAX	491	381	390	373	312	336	270		746	764	706	1044
KM												
420	548					323						
410	548				316	322						439
400	544				315	319						439
390	539				311	314	375					439
380	515		461		302	304	375					437
370	494		460		291	293	371			375		436
360	463	524	452	403	278	279	360			375		433
350	422	523	438	402	259	262	340			375		430
340	370	513	421	397	236	240	315		532	374		426
330	310	494	397	387	212	217	282		530	372	382	421
320	254	471	365	373	186	190	240		525	370	382	415
310	202	432	325	356	158	163	191		515	367	381	407
300	153	377	275	334	133	135	143		502	364	380	399
290	114	315	219	304	109	108	104		486	360	378	391
280	85.3	240	166	269	88.2	83.8	75.0		463	352	375	382
270	63.0	174	116	227	69.1	64.5	53.1		439	345	371	372
260	46.1	116	76.1	185	54.7	49.6	31.3		410	337	367	362
250	19.4	75.4	49.6	143	43.0	35.0			380	330	363	353
240		48.5	12.4	110	20.5	6.7			349	322	358	343
230		12.4		80.9					320	314	354	335
220				60.0					298	307	349	331
210				43.2					278	302	345	328
200				12.4					260	297	341	325
190									242	291	336	321
180									223	286	324	318
170									204	261	310	314
160									186	233	292	311
150									163	204	269	298
140									137	173	240	277
130									123	157	209	247
120									115	148	190	212
110									83.8	97.2	161	169

ELECTRON DENSITY

PUERTO RICO 60 W 18 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	10	113	109	109	110	108	109	271	235	273	294	305
SCAT	164	180	94.8	86.6	84.1	79.8	102	62.6	70.2	58.6	48.6	53.2
HMAXF	30	331	324	343	329	309	359	383	431	428	417	433
SHMAX	703	796	796	874	738	610	655	315	483	433	379	413
KM												
440									454			548
430									454	500		548
420									451	498	532	540
410									443	489	529	519
400									430	471	515	493
390								396	417	446	488	457
380								396	394	417	452	412
370								392	369	380	407	362
360							432	381	340	340	354	303
350				548			431	368	310	297	296	240
340		424		548			428	350	276	248	232	170
330		424	492	545	491		423	326	240	198	174	104
320		424	492	538	491		416	296	206	151	119	61.8
310	424	422	490	528	486	461	407	259	173	107	71.4	29.4
300	424	420	484	517	477	460	395	215	142	75.3	36.8	
290	423	418	477	503	463	455	382	161	114	52.6		
280	421	400	458	480	448	445	369	97.2	91.5	28.6		
270	41	396	441	452	428	433	352		71.4			
260	41	389	424	424	406	417	330		55.3			
250	403	381	408	398	384	400	308		42.1			
240	394	372	393	376	365	377	286		15.3			
230	385	364	380	357	349	347	265					
220	376	358	368	341	334	319	245					
210	368	354	359	332	325	296	224					
200	360	349	353	327	316	278	203					
190	354	346	347	322	304	264	179					
180	348	340	340	316	289	249	151					
170	342	334	334	311	268	233	125					
160	337	317	324	293	243	214	104					
150	316	298	315	265	227	193	90.3					
140	26	273	292	231	205	170	81.9					
130	237	230	240	201	174	147	77.2					
120	224	208	210	187	161	133	72.6					
110	83.8	49.6	83.8	71.4	12.4	104	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 19 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A	B		A
HMIN	283	260	219	228	218	209	229	112	109	109	109	108
SCAT	52.5	49.0	52.5	51.7	41.6	50.6	46.7	52.9	54.4	80.3	59.5	67.6
HMAXF	410	374	353	356	322	318	320	283	287	322	318	336
SHMAX	431	421	425	365	290	259	198	489	780	1162	1226	1680
KM												
420	590											
410	590											
400	585											
390	569											
380	545	625										
370	508	624										
360	457	612	565	492								
350	395	586	565	490								
340	328	549	557	480								1460
330	255	497	538	458	492		323			928		1457
320	179	430	508	431	492	382	323			928	1084	1434
310	112	354	470	394	481	379	319			922	1079	1392
300	69.5	269	424	348	456	370	307			910	1059	1350
290	40.2	174	369	295	417	352	290	582	814	890	1020	1287
280		97.3	303	240	362	331	265	581	810	863	969	1211
270		49.6	240	183	297	296	230	572	794	834	908	1107
260			169	130	219	251	186	552	758	790	844	1004
250			112	81.5	148	198	135	526	716	739	776	885
240			71.4	49.6	86.4	143	78.2	485	663	683	702	767
230			44.7	12.4	49.6	86.6	12.4	433	608	624	629	670
220			2.8		12.4	50.9		375	545	563	563	582
210						6.5		313	482	504	505	514
200								256	417	450	457	462
190								205	362	398	415	421
180								161	310	348	376	386
170								127	260	305	338	355
160								105	221	266	302	321
150								83.8	184	232	266	281
140								75.1	158	204	232	240
130								68.1	148	181	213	219
120								62.3	133	168	200	206
110									71.4	71.4	60.0	143

ELECTRON DENSITY

PUERTO RICO 60 W 19 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL				A		A						
HMIN	110	106	108		107	109	109	220	211	229	230	251
SCAT	60.0	76.9	67.0		70.5	69.7	56.6	56.0	49.0	45.7	55.1	48.1
HMAXF	331	369	357		368	378	350	377	362	359	405	383
SHMAX	1545	1972	1855		1588	1581	1318	1089	906	801	881	756
KM												
410											1027	
400											1025	
390											1007	1072
380						1252		1290			968	1072
370		1460			1215	1248		1285	1155		917	1054
360		1455	1500		1211	1223	1393	1259	1154	1155	856	1010
350		1430	1496		1195	1187	1393	1208	1132	1143	782	947
340	1406	1390	1476		1167	1151	1382	1146	1086	1096	696	863
330	1406	1349	1435		1125	1096	1349	1060	1024	1036	608	763
320	1394	1298	1369		1071	1034	1287	948	947	955	508	643
310	1362	1246	1296		1009	960	1214	811	851	854	409	521
300	1303	1167	1214		940	883	1116	625	748	740	320	389
290	1232	1086	1125		867	800	1012	548	648	608	236	249
280	1143	997	1024		794	716	897	482	540	477	167	155
270	1050	901	917		711	632	772	430	435	310	119	83.8
260	936	803	810		637	558	643	328	319	179	82.4	47.9
250	823	716	716		573	493	524	233	219	101	58.1	
240	716	636	632		514	440	417	143	132	53.9	40.2	
230	620	573	567		465	398	319	64.4	78.3	5.8		
220	545	528	518		425	362	255		45.6			
210	490	493	480		391	330	213					
200	450	463	448		362	300	182					
190	420	433	422		335	273	157					
180	395	401	396		310	247	137					
170	366	369	370		286	221	119					
160	328	335	343		258	192	104					
150	280	295	314		233	166	92.1					
140	234	254	281		204	149	83.2					
130	214	220	247		176	138	78.7					
120	203	208	225		165	131	74.2					
110	40.2	179	127		112	60.0	40.2					

ELECTRON DENSITY

PUERTO RICO 60 W 20 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A							R	A	A	A	
HMIN	238	248	222	265	246	248	210					110
SCAT	42.6	47.5	44.9	51.0	51.6	58.3	55.3					72.6
HMAXF	377	359	323	386	365	389	331					373
SHMAX	774	748	585	552	567	623	541					2311
KM												
390				774		764						
380	1119			771		760						1846
370	1112			754	804	739						1845
360	1072	1191		721	801	712						1831
350	1010	1181		676	782	676						1800
340	937	1143		615	750	630	697					1743
330	855	1079	982	540	707	577	697					1680
320	736	991	981	456	650	508	690					1597
310	608	860	960	362	579	433	669					1497
300	458	703	917	262	491	343	638					1381
290	299	508	846	161	375	240	599					1251
280	192	323	754	83.8	253	150	550					1123
270	127	159	626	45.6	143	89.4	494					974
260	81.1	68.4	461		71.4	52.7	432					834
250	49.6	12.4	274		33.1	12.4	362					726
240	12.4		134				286					637
230			57.4				179					569
220							77.8					522
210												488
200												457
190												427
180												396
170												359
160												318
150												277
140												247
130												230
120												213
110												40.2

ELECTRON DENSITY

PUERTO RICO 60 W 20 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	A	A	A	A	A				
HMIN								229	198	253	250	279
SCAT								58.9	65.8	52.2	66.0	56.8
HMAXF								352	382	387	399	419
SHMAX								983	1123	862	960	865
KM												
420												1119
410												1113
400											1107	1087
390									1119	1155	1102	1045
380									1119	1150	1078	990
370									1109	1118	1047	908
360								1252	1084	1071	1006	802
350								1252	1050	1011	951	679
340								1240	1001	932	875	549
330								1197	941	834	779	417
320								1155	875	716	669	296
310								1096	799	585	550	198
300								1004	716	436	417	105
290								903	629	286	286	55.7
280								779	540	161	179	5.2
270								643	452	87.0	97.2	
260								497	372	44.2	52.8	
250								310	292			
240								127	219			
230								12.4	152			
220									97.2			
210									57.1			
200									12.4			

ELECTRON DENSITY

PUERTO RICO 60 W 21 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A				
HMIN	267	289	208	224	228	246	229	109	110	108	110	107
SCAT	54.4	37.5	51.3	52.2	61.0	52.3	45.9	57.9	81.9	68.0	56.5	85.2
HMAXF	389	330	321	358	371	336	341	300	294	315	305	358
SHMAX	798	609	556	473	482	320	256	639	868	1199	1327	1989
KM												
390	1096											
380	1088				573							
370	1063				573							
360	1015			634	569							1446
350	952			630	556		389					1443
340	875	1143		615	536	500	389					1431
330	773	1143	834	586	510	498	383					1408
320	643	1123	834	548	477	488	369			1050		1376
310	500	1061	825	499	428	468	335	716		1048	1380	1332
300	335	960	800	440	371	444	308	716	794	1036	1377	1278
290	187	822	760	367	310	403	271	711	793	1013	1354	1219
280	91.9	643	705	290	250	349	226	695	788	977	1301	1148
270	32.2	467	625	219	192	270	179	668	777	931	1240	1063
260		262	522	150	135	161	124	633	760	875	1155	975
250		117	389	95.0	81.9	49.6	77.4	584	735	810	1050	881
240		60.0	262	60.0	49.6		48.1	523	707	741	917	789
230		5.2	127	33.5	12.4		7.1	446	673	672	766	703
220			60.0					370	633	604	643	627
210			12.4					292	589	537	545	564
200								228	529	477	477	511
190								179	455	423	426	464
180								147	352	375	386	422
170								120	251	329	347	380
160								99.8	193	282	310	341
150								87.6	155	238	271	305
140								80.9	130	205	230	272
130								76.5	120	171	195	240
120								72.0	112	152	183	212
110								40.2	12.4	97.2	40.2	161

ELECTRON DENSITY

PUERTO RICO 60 W 21 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	R	R	R					A	A			S
HMIN				108	109	109	110	209	239	269	258	274
SCAT				64.7	65.6	59.7	64.1	75.0	61.8	45.6	47.0	45.7
HMAXF				350	351	332	323	367	392	393	385	389
SHMAX				1785	1726	1564	1244	1130	928	758	800	602
KM												
400									1050	1096		
390									1049	1094	1143	960
380									1040	1072	1140	952
370								1096	1018	1020	1114	920
360				1555	1514			1094	978	945	1060	865
350				1555	1514			1082	929	850	985	788
340				1546	1502	1555		1061	867	741	891	679
330				1518	1473	1555	1341	1028	788	631	779	559
320				1472	1424	1540	1340	988	702	515	658	407
310				1401	1366	1504	1327	939	608	377	531	250
300				1317	1287	1446	1298	883	508	253	389	143
290				1212	1183	1370	1252	819	417	155	249	71.4
280				1108	1070	1278	1187	745	310	83.8	137	40.2
270				985	952	1143	1112	665	211	12.4	66.9	
260				858	834	1013	1015	573	127		12.4	
250				734	709	875	901	484	71.4			
240				630	608	741	763	377	12.4			
230				551	521	618	608	240				
220				492	459	514	446	112				
210				449	413	432	310	12.4				
200				417	379	368	231					
190				387	350	318	182					
180				359	324	277	150					
170				330	297	242	125					
160				299	266	212	106					
150				266	234	185	91.6					
140				233	206	162	82.3					
130				205	183	145	77.3					
120				189	169	134	72.4					
110				143	97.2	83.8	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 22 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S		A	A	A
HMIN	251	232	215	208	225	232	239	110	108			
SCAT	45.5	56.4	40.9	61.0	57.2	44.8	49.5	37.8	68.8			
HMAXF	369	353	305	332	358	338	332	266	296			
SHMAX	709	856	574	510	468	372	379	538	964			
KM												
370	1119											
360	1109	1191			599							
350	1070	1190			596							
340	1004	1174		625	585	608	608					
330	917	1140		625	564	602	607					
320	794	1090		619	538	582	598					
310	651	1017	1096	603	496	548	577					
300	491	910	1092	581	446	498	545		960			
290	321	777	1061	550	383	430	498		958			
280	179	617	997	508	315	344	435		947			
270	93.7	428	898	464	240	250	350	875	925			
260	49.6	240	754	411	170	143	240	868	894			
250		121	557	345	105	80.0	97.2	834	856			
240		55.3	286	271	64.9	43.9	12.4	767	799			
230			112	179	30.0			669	730			
220			45.6	83.8				530	649			
210				21.7				389	559			
200								262	467			
190								198	379			
180								156	306			
170								124	247			
160								103	198			
150								89.3	161			
140								81.6	134			
130								77.4	122			
120								73.2	115			
110								12.4	60.0			

ELECTRON DENSITY

PUERTO RICO 60 W 22 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A			A			A					
HMIN		109	109		109	109		209	198	256	286	266
SCAT		65.3	64.3		58.0	56.9		59.7	66.3	61.6	50.6	55.8
HMAXF		349	359		340	335		336	372	401	414	393
SHMAX		2349	2407		2166	1968		1102	1053	896	787	861
KM												
420											1119	
410										1050	1117	
400										1050	1096	1191
390										1042	1053	1190
380									1061	1020	990	1176
370									1061	982	906	1143
360			2161						1052	934	794	1096
350		2144	2150		2227				1026	875	666	1018
340		2134	2113		2227	2161		1393	994	794	521	910
330		2098	2050		2211	2157		1390	949	707	362	778
320		2037	1955		2161	2124		1370	897	608	219	623
310		1949	1841		2068	2057		1327	834	494	122	446
300		1843	1702		1958	1958		1264	764	376	66.0	274
290		1700	1543		1815	1832		1187	686	262	26.8	143
280		1543	1373		1640	1657		1096	608	168		71.4
270		1373	1198		1446	1458		969	519	83.8		27.5
260		1195	1020		1240	1240		823	435	40.2		
250		1004	864		1019	1004		659	352			
240		846	729		834	794		477	262			
230		701	629		671	617		262	179			
220		591	553		553	477		112	112			
210		513	495		467	385		12.4	60.0			
200		457	449		406	329			12.4			
190		417	413		362	289						
180		388	383		326	256						
170		362	350		296	226						
160		335	314		266	198						
150		301	277		238	174						
140		263	249		215	152						
130		230	223		189	133						
120		200	206		169	120						
110		127	112		97.2	71.4						

ELECTRON DENSITY

PUERTO RICO 60 W 23 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL									A	A	A	A
HMIN	264	238	218	201	198	188	229	109				
SCAT	64.8	41.2	45.8	53.2	59.4	89.8	60.8	61.4				
HMAXF	400	333	309	302	323	355	347	300				
SHMAX	1088	772	703	537	474	450	305	671				
KM												
410	1316											
400	1316											
390	1307											
380	1283											
370	1244											
360	1180					389						
350	1127					389	389					
340	1027	1446				386	387					
330	897	1445			625	381	381					
320	754	1413			625	374	369					
310	588	1341	1240	854	617	364	353	697				
300	405	1231	1228	854	601	352	335	697				
290	219	1050	1186	843	581	340	306	693				
280	105	794	1116	816	549	324	265	679				
270	49.6	477	1015	782	497	303	219	655				
260		210	849	716	427	279	168	625				
250		83.8	643	618	343	252	112	583				
240		21.7	362	477	262	222	60.0	530				
230			127	286	179	188	4.5	470				
220			26.8	127	103	151		407				
210				57.1	56.2	107		348				
200					12.4	60.0		289				
190						12.4		236				
180								191				
170								155				
160								127				
150								106				
140								91.5				
130								80.5				
120								72.5				
110								49.6				

ELECTRON DENSITY

PUERTO RICO 60 W 23 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	A	A	A	A					
HMIN								199	218	215	239	256
SCAT								68.5	44.7	54.7	60.1	61.1
HMAXF								339	336	360	385	390
SHMAX								1103	727	856	773	696
KM												
400												875
390											939	875
380											937	869
370										1096	924	851
360										1096	895	821
350										1086	858	783
340								1265	1107	1058	806	728
330								1260	1103	1011	739	654
320								1240	1067	946	656	561
310								1201	1010	867	558	455
300								1161	932	771	458	345
290								1108	834	659	352	219
280								1028	716	540	234	127
270								923	590	396	149	69.0
260								802	429	262	87.6	26.8
250								679	262	179	49.6	
240								508	143	107	6.7	
230								335	67.4	62.7		
220								198	12.4	30.7		
210								91.6				
200								12.4				

ELECTRON DENSITY

PUERTO RICO 60 W 24 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								S			A	A
HMIN	248	237	207	213	208	206	229		109	104		
SCAT	47.6	50.3	58.9	46.7	40.9	42.6	45.4		47.7	58.6		
HMAXF	366	346	331	325	302	291	321		255	288		
SHMAX	554	536	525	363	303	212	205		628	915		
KM												
370	836											
360	831											
350	811	834										
340	773	831	707									
330	720	813	707	557			335					
320	643	778	701	555			335					
310	540	730	685	541	540		331					
300	441	658	658	516	540	382	318					
290	325	554	625	477	528	382	297			917		
280	205	417	573	423	499	376	269			913		
270	112	272	499	357	458	359	231			896		
260	60.0	143	407	286	389	335	188		834	864		
250	12.4	71.4	302	207	310	296	136		831	821		
240		19.9	198	127	219	240	76.0		812	763		
230			105	73.8	127	172	12.4		773	700		
220			60.0	41.9	64.0	97.2			716	633		
210			18.5		12.4	40.2			647	564		
200									555	496		
190									446	430		
180									349	367		
170									273	315		
160									219	270		
150									179	233		
140									151	194		
130									129	158		
120									118	139		
110									49.6	131		

ELECTRON DENSITY

PUERTO RICO 60 W 24 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL												
HMIN	109	110	111	108	109	109	109	210	199	232	231	241
SCAT	56.5	50.6	71.1	63.3	58.8	56.8	56.4	74.5	68.0	49.4	45.5	48.3
HMAXF	335	325	352	348	339	327	313	338	365	353	359	366
SHMAX	1843	1824	2297	2051	1906	1727	1431	1217	997	668	614	573
KM												
370									1038			844
360			2032						1037	960	896	841
350			2031	1891					1025	959	887	817
340	1786		2018	1885	1907			1328	1002	944	854	782
330	1783	2032	1984	1855	1897	1891		1325	969	907	803	726
320	1755	2028	1930	1802	1859	1883	1756	1309	925	852	734	649
310	1700	1990	1852	1717	1794	1847	1755	1281	866	779	651	555
300	1602	1912	1763	1618	1695	1781	1734	1240	794	688	551	446
290	1495	1786	1652	1498	1574	1686	1685	1192	709	584	446	335
280	1363	1631	1510	1360	1434	1567	1608	1143	618	465	343	224
270	1219	1446	1350	1209	1279	1405	1512	1050	530	335	235	140
260	1060	1258	1160	1064	1143	1221	1374	944	446	198	147	81.6
250	917	1021	981	917	960	1050	1196	814	362	112	83.8	46.8
240	783	824	825	768	803	834	975	679	278	53.4	47.9	
230	667	660	692	636	663	664	742	508	192			
220	573	540	579	530	540	525	522	262	118			
210	508	468	496	456	446	417	362	124	66.1			
200	458	417	438	404	383	347	257		12.4			
190	422	383	395	367	335	296	202					
180	393	357	362	339	300	259	167					
170	367	337	333	321	271	226	141					
160	340	310	310	301	244	197	120					
150	310	272	281	273	214	169	104					
140	275	234	240	235	181	143	91.6					
130	236	213	213	201	160	127	81.7					
120	210	199	198	186	149	118	75.1					
110	179	40.2		143	83.8	83.8	40.2					

ELECTRON DENSITY

PUERTO RICO 60 W 25 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL			A					S				A
HMIN	251	221	203	205	201	218	208		109	103	106	
SCAT	36.8	40.8	42.4	44.3	50.6	42.2	46.8		47.8	57.3	88.9	
HMAXF	344	322	297	300	329	323	315		278	283	335	
SHMAX	433	485	466	334	324	253	301		771	1018	1682	
KM												
350	834											
340	832										1341	
330	805	875			446	417					1340	
320	740	875			443	417	477				1331	
310	660	857		573	431	407	475				1314	
300	548	814	834	573	410	385	465				1289	
290	408	745	829	567	381	352	443			1191	1255	
280	262	643	802	545	342	310	413		960	1190	1211	
270	127	508	754	510	297	256	368		964	1175	1166	
260	60.0	352	679	459	246	198	310		928	1143	1109	
250		198	579	389	191	135	235		880	1096	1029	
240		97.3	446	299	135	83.8	152		813	1026	932	
230		49.6	273	198	92.7	52.0	92.7		716	917	815	
220			120	87.9	61.5	12.4	54.8		622	769	679	
210			52.1	36.2	40.3		12.4		508	608	553	
200									413	477	452	
190									341	381	389	
180									286	319	348	
170									240	277	316	
160									198	238	289	
150									161	202	264	
140									134	167	233	
130									114	143	190	
120									105	137	170	
110									83.8	130	148	

ELECTRON DENSITY

PUERTO RICO 60 W 25 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	A	A	A	A					
HMIN								199	188	215	234	248
SCAT								56.8	53.7	51.0	49.2	48.3
HMAXF								312	322	253	348	362
SHMAX								1188	861	787	613	569
KM												
370												854
360										1050		854
350										1049	917	841
340										1033	910	807
330									1096	996	885	759
320								1669	1095	939	843	689
310								1668	1081	864	778	598
300								1649	1050	775	689	498
290								1603	993	679	586	389
280								1530	923	566	477	262
270								1446	839	456	335	143
260								1314	744	321	198	71.4
250								1143	643	198	92.9	21.2
240								917	540	120	45.4	
230								608	417	68.6		
220								286	294	33.1		
210								97.2	161			
200								12.4	80.0			
190									22.3			

ELECTRON DENSITY

PUERTO RICO 60 W 26 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	R
HMIN	241	218	198	189	209	188	228	110	106	106		109
SCAT	46.0	42.4	32.6	46.4	49.0	47.2	35.8	61.3	43.1	49.3		78.3
HMAXF	355	318	288	293	301	289	309	280	264	257		339
SHMAX	567	535	410	384	296	200	154	530	664	674		1658
KM												
360	896											
350	893											
340	872											1341
330	834											1337
320	767	971										1322
310	670	963				469		310				1295
300	573	930		608	469		305					1258
290	446	875	875	607	463	310	287	590				1207
280	300	767	861	595	446	307	259	590				1152
270	179	643	807	568	423	298	216	587	896			1082
260	97.3	461	716	528	389	281	161	575	894	875		999
250	49.6	253	573	477	335	258	103	552	871	871		904
240		127	417	406	276	227	57.9	526	827	849		803
230		62.9	262	324	202	189	12.4	492	754	812		699
220		17.4	127	230	120	143		446	643	758		597
210			62.8	127	12.4	102		392	508	667		512
200			12.4	65.6		60.0		335	417	540		446
190				12.4		12.4		279	352	412		398
180								219	303	335		362
170								155	262	290		334
160								119	225	252		312
150								102	189	219		287
140								81.5	157	191		252
130								69.5	122	151		211
120								62.5	108	135		188
110									98.7	118		143

ELECTRON DENSITY

PUERTO RICO 60 W 26 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			A		A		A					
HMIN	107	104	107	109	110	111		209	209	219	246	267
SCAT	63.4	63.5	67.4	59.2	52.7	57.6		54.9	45.5	49.8	45.9	46.9
HMAXF	337	349	345	338	326	321		323	336	356	366	392
SHMAX	1722	1992	2012	1907	1698	1522		1052	813	867	693	676
KM												
400												1004
390												1004
380												988
370											1050	948
360										1191	1046	888
350		1786	1831							1187	1019	802
340	1555	1777	1828	1907					1179	1160	969	700
330	1550	1747	1809	1897	1891	1669		1446	1173	1106	892	573
320	1527	1695	1764	1861	1885	1668		1445	1143	1033	794	446
310	1484	1615	1702	1797	1848	1654		1425	1079	940	672	318
300	1418	1520	1628	1704	1775	1614		1380	991	834	540	198
290	1341	1401	1533	1588	1669	1547		1308	889	716	417	112
280	1240	1264	1407	1446	1534	1453		1217	776	573	262	62.3
270	1119	1126	1258	1262	1358	1341		1104	643	417	143	19.6
260	995	981	1096	1081	1172	1210		942	500	269	74.7	
250	875	844	936	890	960	1072		754	362	161	27.5	
240	754	716	786	733	794	891		573	219	97.2		
230	643	622	658	608	631	707		362	120	54.9		
220	545	544	554	508	516	540		179	66.2	5.8		
210	477	483	477	442	432	412		40.2	12.4			
200	425	434	421	395	374	330						
190	383	395	381	360	330	277						
180	365	362	350	331	294	240						
170	348	333	321	305	262	208						
160	330	307	293	280	233	178						
150	300	283	262	254	200	152						
140	264	257	229	227	173	133						
130	225	215	198	198	158	123						
120	190	191	187	184	149	117						
110	97.2	170	163	97.2	49.6							

ELECTRON DENSITY

PUERTO RICO 60 W 27 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A	A	A
HMIN	265	224	189	199	225	218	264	111	108			
SCAT	40.7	39.0	41.9	50.8	38.2	78.9	52.9	53.6	45.3			
HMAXF	378	317	267	307	308	369	373	271	276			
SHMAX	596	638	401	336	200	287	204	461	692			
KM												
380	1004						286					
370	994					280	285					
360	952					279	281					
350	883					276	272					
340	780					271	257					
330	657					263	240					
320	518	1240				253	214					
310	372	1229		484	389	243	183					
300	230	1180		482	385	229	146					
290	132	1096		468	367	211	107					
280	71.4	951		449	335	190	71.4	590	917			
270	34.0	754	794	419	292	165	40.2	590	913			
260		491	788	378	232	137		584	889			
250		240	761	329	153	109		567	842			
240		112	716	273	81.5	79.7		545	773			
230		47.5	643	211	34.0	49.6		508	679			
220			508	143		12.4		446	573			
210			310	74.9				374	464			
200			104	12.4				297	374			
190			12.4					225	297			
180								171	236			
170								127	190			
160								99.0	152			
150								80.5	120			
140								70.4	97.2			
130								65.9	92.9			
120								61.4	88.4			
110									83.8			

ELECTRON DENSITY

PUERTO RICO 60 W 27 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL							R					
HMIN	109	109	109	107	109	110		189	198	225	238	270
SCAT	71.1	65.5	55.5	58.4	53.2	52.2		56.4	58.9	80.9	45.8	50.1
HMAXF	342	347	339	340	339	313		312	348	407	358	386
SHMAX	1630	1773	1797	1939	1887	1798		1071	870	969	512	495
KM												
410										917		
400										915		
390										907		716
380										892		714
370										868		699
360										838	794	668
350	1341	1542		1969					1038	802	788	627
340	1341	1537	1786	1969	2096				1034	759	764	566
330	1331	1516	1775	1954	2080				1014	704	720	488
320	1308	1476	1736	1911	2032	2294		1446	977	643	658	401
310	1272	1412	1669	1828	1935	2292		1446	929	558	573	310
300	1221	1334	1564	1729	1813	2260		1431	867	477	477	219
290	1162	1240	1446	1604	1649	2186		1393	794	377	362	127
280	1086	1143	1292	1446	1446	2073		1330	701	286	240	64.2
270	994	1021	1143	1267	1240	1918		1248	598	198	154	
260	899	897	974	1050	989	1703		1143	493	130	92.3	
250	799	778	817	875	794	1406		1004	376	83.8	55.9	
240	704	679	679	716	643	1096		834	269	54.6	12.4	
230	621	586	573	590	519	794		608	174	22.3		
220	550	515	496	495	440	553		417	106			
210	495	461	440	428	382	412		219	60.0			
200	451	420	400	379	338	330		89.1	12.4			
190	414	389	370	343	304	280		12.4				
180	381	362	346	316	275	244						
170	347	337	324	290	248	215						
160	314	312	302	262	222	191						
150	283	283	274	231	195	168						
140	244	252	240	205	164	147						
130	198	217	206	184	142	130						
120	184	189	188	170	133	117						
110	49.6	143	112	143	60.0	49.6						

ELECTRON DENSITY

PUERTO RICO 60 W 28 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A	A	
HMIN	253	254	238	194	216	198	229	110	110			107
SCAT	44.7	41.2	48.3	48.8	40.5	42.6	38.4	37.8	50.1			63.4
HMAXF	369	367	351	311	324	301	308	262	265			321
SHMAX	451	440	530	424	378	355	307	517	781			1500
KM												
370	697	716										
360	691	711	794									
350	665	687	793									
340	625	643	783									
330	567	573	754		643							1446
320	496	492	708	608	641							1446
310	412	403	648	608	622	590	608					1436
300	316	310	573	600	582	590	600					1408
290	219	213	483	580	525	580	573					1362
280	137	134	376	546	450	552	527					1297
270	76.7	71.4	262	500	362	512	454	875	1143			1222
260	42.0	40.2	134	443	268	450	362	874	1140			1115
250			65.6	378	179	380	219	852	1117			1004
240			12.4	310	102	296	112	801	1071			875
230				240	60.0	208	12.4	716	1009			744
220				161	24.1	112		587	899			627
210				88.7		60.0		427	716			532
200				40.2		12.4		294	508			453
190								203	321			389
180								150	235			339
170								116	184			295
160								92.2	143			253
150								76.6	121			213
140								69.3	110			189
130								65.7	105			175
120								62.1	99.7			167
110								40.2	12.4			127

ELECTRON DENSITY

PUERTO RICO 60 W 28 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		A				A					
HMIN	110	109		110	109	110		211	199	200	229	258
SCAT	76.0	54.4		56.6	49.6	59.8		49.6	40.6	45.5	56.8	49.4
HMAXF	361	331		324	311	323		310	287	323	361	382
SHMAX	1905	1781		1838	1617	1626		1076	651	596	527	449
KM												
390												643
380												643
370	1500										679	634
360	1500										679	612
350	1492										673	576
340	1471	1907									657	529
330	1433	1906		1969		1846				917	629	468
320	1382	1885		1966	1969	1844		1741		916	593	394
310	1324	1832		1939	1968	1822		1741		898	545	314
300	1240	1745		1873	1943	1772		1723		855	481	228
290	1165	1634		1786	1870	1700		1669	1191	794	406	152
280	1073	1479		1669	1765	1606		1586	1181	710	323	91.9
270	960	1299		1526	1625	1478		1471	1135	599	245	54.4
260	859	1064		1363	1446	1314		1286	1050	477	168	12.4
250	760	866		1143	1226	1075		1050	935	356	104	
240	679	697		935	989	851		679	784	240	56.9	
230	611	567		754	769	643		310	608	143	5.2	
220	555	477		598	586	487		83.8	362	83.8		
210	501	417		496	457	373			143	49.6		
200	446	381		424	378	298			12.4			
190	389	356		372	328	252						
180	340	337		333	293	217						
170	296	313		303	262	185						
160	254	275		274	239	153						
150	223	240		240	215	125						
140	204	220		208	188	112						
130	192	209		182	164	106						
120	183	198		168	149	100						
110	40.2	143		49.6	60.0	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 29 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		F		F	F	F	F		A	A	R	A
HMIN	263	198	227	304	266			110	109		108	110
SCAT	51.6	38.7	47.3	53.8	53.9			42.4	51.5		78.8	86.0
HMAXF	381	288	336	457	413			262	266		353	364
SHMAX	455	310	331	380	464			492	499		1528	1909
KM												
460				461								
450				460								
440				451								
430				431								
420				406	582							
410				374	581							
400				335	573							
390	661			295	552							
380	661			250	525							1393
370	653			204	490						1143	1393
360	631			165	443						1142	1384
350	601			127	389						1135	1367
340	555		508	92.8	335						1118	1341
330	490		506	67.1	276						1091	1298
320	409		494	48.2	211						1056	1256
310	315		470	23.5	153						1012	1202
300	214		438		106						960	1139
290	137	625	389		71.4						900	1060
280	76.6	618	329		48.5						838	973
270	41.9	589	262		16.8			784	608		770	881
260		544	189					783	606		700	794
250		464	112					767	593		628	700
240		335	62.6					727	568		559	616
230		179	19.6					669	532		497	549
220		94.5						582	486		446	499
210		55.9						456	430		407	456
200		12.4						310	362		376	414
190								203	292		349	375
180								140	232		320	339
170								106	185		286	304
160								88.1	151		251	275
150								76.1	127		213	246
140								69.2	113		178	190
130								65.1	106		164	168
120								61.1	100		127	49.6
110								12.4	71.4			

ELECTRON DENSITY

PUERTO RICO 60 W 29 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL							R			A		
HMIN	110	109	110	106	109	109		214	202	198	260	277
SCAT	48.7	44.8	57.9	52.8	55.1	54.3		52.7	47.5	48.4	45.7	47.0
HMAXF	324	301	319	322	318	318		323	308	321	371	398
SHMAX	1565	1460	1510	1435	1457	1228		1020	595	496	447	451
KM												
400												661
390												656
380											679	635
370											679	601
360											669	553
350											643	493
340											600	423
330	1697			1473				1487		716	540	345
320	1695		1542	1473	1583	1367		1485		716	467	262
310	1661	1815	1532	1453	1575	1359		1463	917	707	389	179
300	1586	1815	1500	1396	1537	1321		1410	911	683	310	105
290	1487	1789	1446	1331	1480	1263		1349	886	643	219	60.0
280	1355	1697	1365	1240	1404	1188		1247	837	589	131	19.0
270	1205	1584	1261	1116	1287	1096		1096	771	516	63.8	
260	1050	1446	1143	1004	1143	969		917	692	437		
250	875	1250	997	875	980	819		716	592	354		
240	716	1050	842	740	804	668		463	470	262		
230	598	834	690	618	643	540		240	335	175		
220	508	643	573	521	523	439		71.4	161	106		
210	443	508	481	446	433	362			64.0	60.0		
200	401	427	417	389	369	310				12.4		
190	371	378	375	351	324	269						
180	346	346	343	321	289	236						
170	322	319	315	293	261	208						
160	297	293	287	266	240	182						
150	267	264	254	236	219	158						
140	233	233	224	206	193	137						
130	198	202	198	183	169	124						
120	185	187	184	171	152	116						
110	49.6	127	49.6	161	112	71.4						

ELECTRON DENSITY

PUERTO RICO 60 W 30 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A						A	A	A	A	A	A
HMIN	280	241	210	188	228	228	202		107			
SCAT	50.0	46.9	57.4	65.7	67.4	38.0	81.9		80.8			
HMAXF	397	338	320	365	361	315	424		361			
SHMAX	565	588	502	556	314	199	298		592			
KM												
430							240					
420							240					
410							238					
400	834						235					
390	829						230					
380	809						223					
370	771			557	355		213		389			
360	720			556	355		204		389			
350	643			549	353		192		387			
340	550	1004		535	346		177		382			
330	446	997	679	516	336		161		374			
320	322	967	679	491	322	382	143		363			
310	198	917	674	459	306	380	127		344			
300	105	834	659	421	284	367	112		322			
290	55.3	716	632	379	255	341	97.2		303			
280		540	597	335	222	301	85.0		288			
270		349	551	292	183	243	74.1		276			
260		171	491	251	143	172	64.4		265			
250		65.9	417	213	99.7	106	55.8		252			
240			324	176	60.0	57.4	48.2		238			
230			219	141	12.4	12.4	41.8		227			
220			112	107			28.2		215			
210				75.0			12.4		205			
200				49.6					192			
190				12.4					175			
180									155			
170									137			
160									122			
150									110			
140									100			
130									93.8			
120									88.8			
110									83.8			

ELECTRON DENSITY

PUERTO RICO 60 W 30 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL							A	A		A		
HMIN	112	110	110	110	109	108		197	207	215	248	248
SCAT	85.1	66.9	85.4	131	112	56.4		53.2	47.3	61.2	57.8	64.2
HMAXF	315	304	284	310	346	294		334	333	350	376	392
SHMAX	640	572	528	562	668	516		344	355	373	320	373
KM												
400												421
390												421
380											403	418
370											402	405
360										446	395	392
350					389					446	382	373
340					389			446	508	443	365	350
330					387			446	508	434	341	324
320	434			355	384			439	499	419	310	291
310	434	424		355	379			424	479	398	271	251
300	436	424		354	372	508		400	446	372	227	207
290	430	420	410	353	364	507		369	404	339	179	161
280	420	408	410	350	352	500		332	354	297	137	120
270	405	393	407	347	339	485		286	295	252	93.0	80.7
260	387	374	402	342	325	462		240	237	202	55.3	49.6
250	367	353	394	336	311	432		191	175	151	12.4	12.4
240	350	330	381	327	298	392		143	123	101		
230	332	310	365	316	285	347		97.2	83.8	60.0		
220	316	295	346	305	275	303		68.3	52.6	29.4		
210	304	284	328	293	265	266		46.5	17.5			
200	295	278	311	283	257	239		12.4				
190	286	273	300	274	250	219						
180	278	268	289	266	243	201						
170	269	263	276	254	230	181						
160	258	252	261	240	210	158						
150	240	241	242	224	186	134						
140	216	206	211	198	168	119						
130	194	178	184	176	155	109						
120	171	167	168	164	147	103						
110		40.9	49.6	12.4	71.4	83.8						

ELECTRON DENSITY

PUERTO RICO 60 W 31 AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A		
HMIN	261	256	238	222	222	205	198	111	110		109	106
SCAT	48.6	48.5	52.6	45.2	45.0	40.4	58.3	38.3	89.1		62.1	63.3
HMAXF	379	368	354	340	320	297	308	254	306		301	312
SHMAX	272	258	279	216	204	176	148	250	448		685	989
KM												
380	389											
370	385	382										
360	374	379	396									
350	353	369	395	316								
340	326	349	389	316								
330	289	323	374	312	335							
320	244	288	359	298	335							875
310	198	243	328	280	331		193		329		590	875
300	153	194	286	254	319	310	193		329		590	867
290	112	139	237	222	298	308	189		326		585	848
280	71.4	91.3	179	186	271	296	183		322		573	817
270	44.2	57.1	127	152	232	275	172		316		552	777
260		23.7	79.6	120	182	246	161	348	306		525	726
250			49.6	88.7	127	204	146	347	292		489	662
240			12.4	60.0	75.8	158	128	335	278		446	586
230				35.7	44.1	108	104	315	262		404	513
220						66.0	79.4	279	249		365	450
210						30.7	54.3	234	237		335	403
200							12.4	194	228		314	367
190								163	219		301	343
180								138	207		290	324
170								117	193		273	308
160								98.5	174		248	289
150								83.8	151		206	264
140								72.2	127		173	231
130								66.4	109		158	193
120								61.0	99.9		150	172
110									49.6		127	161

ELECTRON DENSITY

PUERTO RICO 60 W 31 AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	A	A	A	A	A					
HMIN	108							210	198	227	205	249
SCAT	60.0							56.9	66.3	50.3	56.4	42.1
HMAXF	318							315	351	350	338	349
SHMAX	1229							523	578	391	374	235
KM												
360									634	548		
350									634	548		389
340									629	543	477	384
330									618	525	475	368
320	1191							716	598	503	465	341
310	1185							715	575	464	448	303
300	1163							703	540	412	424	257
290	1123							681	498	354	393	207
280	1070							647	446	290	352	153
270	996							603	389	219	304	97.2
260	895							546	330	161	247	53.9
250	780							470	266	104	193	5.8
240	655							380	204	60.0	139	
230	540							286	139	19.0	91.5	
220	460							170	86.4		57.9	
210	405							12.4	52.7		27.7	
200	368								12.4			
190	344											
180	325											
170	310											
160	280											
150	265											
140	229											
130	197											
120	184											
110	143											

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — AUG 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
COUNT	25	24	24	23	22	25	24	15	23	16	15	16
HMIN	265	246	233	226	228	227	232	115	108	106	107	107
RATIO	5.4	5.5	5.5	5.2	5.5	5.4	5.7	4.8	4.1	3.6	301	3.1
SCAT	47.5	47.2	48.1	49.7	47.2	50.4	48.9	50.0	58.5	70.4	86.1	83.4
NMAX	741	779	685	555	491	468	449	614	728	812	882	1124
HMAXF	379	354	341	338	336	334	331	275	286	304	332	353
SHMAX	493	485	432	372	315	308	278	458	674	889	1160	1485
SHINF	2584	2684	2364	1936	1701	1628	1544	2189	2729	3180	3647	4655
KM												
950	70.6	64.2	52.8	42.7	37.6	36.2	33.3	34.5	43.6	53.2	66.9	93.3
900	90.5	82.2	67.8	54.8	48.2	46.5	42.6	44.3	56.0	68.2	85.7	120
850	116	105	86.9	70.2	61.8	59.6	54.7	56.8	71.7	87.5	110	153
800	148	135	111	90.0	79.2	76.3	70.1	72.8	92.0	112	141	196
750	190	173	142	115	101	97.7	89.7	93.4	118	144	180	251
700	242	221	182	147	129	125	115	120	151	184	230	321
650	306	280	231	187	165	159	146	153	193	234	293	407
600	384	354	293	237	208	200	185	195	245	298	371	514
550	476	442	367	297	261	251	232	247	310	375	465	642
500	575	542	452	366	321	309	286	310	388	468	573	787
490	595	563	470	380	334	321	298	325	405	488	596	817
480	614	584	488	395	347	333	309	339	423	509	620	848
470	633	605	506	410	360	345	321	354	441	530	643	878
460	651	626	524	425	372	358	333	369	459	551	667	908
450	668	646	542	439	385	370	345	385	478	573	690	937
440	684	666	560	454	398	382	357	401	497	594	713	965
430	698	685	577	468	410	393	368	418	516	616	735	992
420	711	702	593	481	422	404	379	434	535	637	757	1018
410	721	719	609	494	433	414	390	451	555	658	777	1041
400	728	733	623	506	442	424	400	467	573	679	796	1062
390	730	746	636	517	451	432	409	484	592	699	814	1080
380	727	757	648	526	457	439	417	500	610	718	829	1094
370	717	764	657	533	463	442	424	516	628	736	843	1105
360	695	765	662	538	466	444	428	532	644	752	854	1111
350	658	756	662	539	466	442	431	547	660	766	861	1111
340	605	737	655	536	460	437	431	561	673	778	865	1103
330	538	706	640	525	447	427	428	574	685	788	865	1088
320	456	662	615	508	435	411	420	585	694	794	859	1064
310	364	605	581	482	416	395	408	595	701	797	848	1030
300	265	530	535	446	390	370	385	603	706	794	831	988
290	167	435	478	398	356	338	358	608	707	785	807	937
280	95.2	335	411	348	315	298	325	610	704	769	775	879
270	49.2	238	340	293	269	253	280	608	695	745	738	812
260	24.0	145	261	237	220	203	223	598	679	710	697	742
250	9.5	75.6	189	181	171	152	155	574	653	669	650	672
240	2.1	38.2	124	126	120	112	93.0	537	616	620	598	602
230		15.7	73.7	81.4	79.9	75.8	46.2	482	569	568	544	538
220		5.4	40.4	44.0	45.5	43.2	21.6	409	512	511	493	485
210		2.8	19.0	20.1	19.9	19.9	8.5	328	446	455	447	442
200		1.7	4.9	5.7	4.9	7.9	1.8	250	380	404	409	407
190			.5	.5	1.8	1.5		193	316	360	376	378
180								149	265	323	348	353
170								116	222	289	320	327
160								94.6	187	254	291	301
150								80.1	157	220	259	272
140								70.8	133	188	223	241
130								65.3	118	161	193	209
120								59.8	109	146	177	190
110								21.2	63.6	102	114	125
100								1.7	1.1	4.1	8.9	2.3

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — AUG 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
COUNT	20	18	15	19	23	18	11	24	25	27	27	24
HMIN	107	106	107	106	107	108	118	215	214	234	253	264
RATIO	3.3	3.5	3.4	3.5	3.6	3.9	4.1	5.0	4.5	4.8	409	4.9
SCAT	73.0	69.4	68.1	65.0	64.5	59.1	61.5	55.7	57.0	54.1	51.6	52.6
NMAX	1203	1358	1258	1337	1321	1312	1121	1106	887	860	778	745
HMAXF	341	334	335	334	335	325	326	332	361	371	380	389
SHMAX	1426	1501	1469	1441	1395	1269	1025	815	728	658	566	538
SHINF	4819	5333	5018	5212	5122	4971	4188	3935	3230	3085	2761	2641
KM												
950	95.4	104	100	102	101	96.7	81.6	82.6	76.2	78.0	74.6	74.8
900	122	134	128	131	129	124	105	106	97.7	100	95.7	95.9
850	157	171	164	168	166	159	134	136	125	128	123	123
800	201	220	211	216	212	204	172	174	160	164	157	157
750	257	281	270	276	272	261	220	223	205	210	201	201
700	328	359	344	353	347	333	281	285	262	267	255	255
650	418	457	438	449	442	425	358	362	332	339	323	323
600	528	578	553	568	559	538	454	459	419	426	406	404
550	661	724	693	713	701	676	571	576	522	529	501	498
500	814	893	852	881	866	836	708	713	637	642	605	597
490	846	929	886	916	901	871	737	742	661	665	625	617
480	870	965	920	952	937	906	767	771	685	688	645	635
470	911	1002	954	988	972	941	797	801	708	710	665	653
460	944	1038	987	1025	1008	976	827	831	732	732	683	670
450	976	1074	1021	1061	1043	1012	858	861	754	752	701	686
440	1007	1110	1053	1096	1078	1047	888	890	776	772	717	700
430	1038	1145	1085	1131	1112	1081	918	919	796	790	731	712
420	1067	1178	1115	1164	1145	1115	947	947	815	806	743	721
410	1094	1210	1143	1196	1176	1147	975	974	831	820	753	727
400	1119	1239	1168	1226	1205	1178	1002	999	846	830	757	729
390	1141	1266	1191	1253	1232	1206	1027	1023	858	837	757	725
380	1160	1289	1211	1277	1255	1232	1050	1044	867	839	750	714
370	1176	1309	1227	1297	1275	1254	1070	1062	871	835	736	692
360	1187	1325	1237	1313	1290	1272	1087	1076	869	826	712	660
350	1191	1334	1241	1324	1299	1285	1101	1087	859	806	679	617
340	1188	1336	1236	1327	1301	1294	1110	1091	840	775	634	561
330	1175	1330	1218	1319	1294	1296	1113	1089	811	732	577	492
320	1150	1311	1190	1298	1276	1289	1108	1077	769	675	508	415
310	1112	1278	1151	1260	1245	1267	1091	1053	715	605	432	331
300	1057	1230	1101	1205	1198	1223	1061	1011	648	524	350	248
290	993	1165	1035	1131	1136	1161	1017	950	573	431	263	167
280	915	1082	957	1043	1057	1084	954	870	492	337	181	110
270	831	986	869	941	963	985	876	769	406	248	118	59.7
260	743	880	775	832	860	874	779	648	320	164	65.9	26.2
250	657	769	684	718	746	750	670	505	235	99.0	32.0	8.3
240	578	665	599	614	634	625	554	347	163	57.7	15.9	2.1
230	510	570	526	525	531	510	441	207	103	27.4	6.0	.3
220	456	494	468	453	448	417	340	107	55.4	11.8	3.6	
210	417	437	424	402	388	350	263	32.5	27.5	3.6	1.2	
200	388	397	391	367	347	304	208	7.4	7.7	1.0		
190	365	369	366	341	317	271	171	.5	.9			
180	346	347	345	320	293	243	144					
170	328	328	324	300	270	217	121					
160	306	306	302	278	245	192	103					
150	279	280	275	252	218	168	90.4					
140	246	249	243	222	191	147	80.9					
130	215	217	212	195	168	131	74.3					
120	197	197	196	180	155	120	69.1					
110	102	142	107	116	81.2	65.6	22.6					
100	5.7	20.0	10.1	3.3	2.2	1.4						

TABLES OF IONOSPHERIC DATA

JULY 1960 - FEBRUARY 1954

Table 1

Washington, D. C. (38.7° N, 77.1° W) — July 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.9	31	290				2.5	2.70
01		5.7	31	290				1.7	2.70
02		5.2	31	290				2.5	2.70
03		4.7	30	280					2.75
04		4.2	31	285					2.70
05	---	4.2	31	290		119	1.82		2.85
06	520	4.9	31	250	3.6	115	2.38	2.7	2.80
07	460	5.3	31	230	4.2	109	2.90	3.2	2.70
08	495	5.5	31	230	4.6	109	3.25	3.7	2.60
09	470	5.75	30	215	4.8	107	3.45	3.8	2.65
10	460	6.2	31	210	5.0	105	3.65	4.0	2.65
11	465	6.2	30	205	5.0	105	3.70	4.1	2.60
12	430	6.15	28	205	5.0	105	3.90	4.1	2.65
13	440	6.35	30	210	5.2	105	3.80	4.2	2.62
14	425	6.4	31	215	5.0	109	3.80	3.9	2.65
15	420	6.5	31	220	5.0	109	3.60	3.7	2.65
16	405	6.5	31	225	4.8	109	3.40	3.6	2.70
17	360	6.7	31	235	4.5	109	3.10	3.4	2.80
18	315	6.8	31	240	---	113	2.60	3.0	2.00
19	290	7.0	31	<270		121	1.95	2.4	2.90
20		6.9	31	265				2.3	2.80
21		6.6	30	260					2.72
22		6.4	31	280				2.5	2.75
23		6.1	31	280				1.7	2.70

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 2

Huancayo, Peru (12.0° S, 75.3° W) — July 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs*	(M3000)F2
00		7.2	28	230					3.10
01		6.35	30	235					3.15
02		6.0	29	240					3.15
03		5.4	29	245				1.8	3.20
04		4.9	31	250					3.15
05		4.6	29	255					3.10
06		4.15	28	200				1.9	3.00
07		7.0	31	255		123	(2.30)	5.8	3.05
08		9.0	31	235		115	(2.95)	7.3	2.90
09		9.7	31	220		109	(3.35)	12.8	2.65
10	---	9.4	31	210		---	(3.60)	14.3	2.52
11	---	9.35	30	200	---	---	(3.80)	17.2	2.40
12	---	9.05	30	200	---	---	(3.88)	17.2	2.40
13	---	9.0	30	200	---	---	(3.80)	17.8	2.35
14	---	9.0	30	200	---	---	(3.68)	17.0	2.35
15	---	9.0	31	210	---	---	(3.40)	17.0	2.30
16		9.1	31	225		---	(3.02)	11.4	2.40
17		9.0	31	250		---	(2.50)	9.0	2.40
18		0.7	31	290		---	(1.52)	3.2	2.45
19		7.9	31	345					2.35
20		7.5	29	320					2.45
21		7.7	28	265					2.60
22		7.7	28	235					2.95
23		7.4	27	235					3.05

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.
*High-gain antenna used through July 20.

Table 3

Talara, Peru (4.6° S, 81.3° W) — June 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.65	22	230					2.95
01		8.3	24	240					3.05
02		8.3	27	250					3.15
03		7.1	25	240					3.30
04		6.0	25	240					3.15
05		5.6	24	255					2.95
06		5.0	26	260					2.90
07		6.6	26	260		(125)	2.20		2.95
08		8.0	28	235		115	2.90		2.82
09		8.7	29	225		111	3.38		2.58
10		9.25	30	215		109	3.60		2.35
11		9.3	30	205	---	109	3.00		2.20
12	---	9.5	30	205	---	108	3.90	4.1	2.20
13	---	9.65	30	<210	---	108	3.90	3.9	2.20
14	---	10.0	29	205	---	109	3.75		2.20
15	---	10.3	29	210	---	109	3.50	3.7	2.15
16	---	10.4	29	215		109	3.20	3.6	2.20
17	---	10.4	29	240		113	2.75		2.30
18		(9.75)	30	270		<139	2.05	2.2	(2.30)
19		>9.55	30	315				2.0	(2.30)
20		9.3	29	340					(2.35)
21		9.5	26	340					2.50
22		9.05	26	280					2.80
23		>9.6	22	240					3.02

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 4

Resolute Bay, Canada (74.7° N, 94.9° W) — May 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	5.6	27	255	---	120	2.00		2.90
01	---	5.2	28	250	---	110	2.00		2.90
02	---	5.8	28	250	---	115	2.10		2.90
03	(400)	5.8	28	240	3.4	100	2.20		2.80
04	375	5.3	28	230	3.6	100	2.30		3.00
05	440	5.2	28	225	3.8	100	2.50		2.80
06	400	5.1	27	220	3.9	100	2.70		2.60
07	400	5.2	27	220	4.1	100	2.80		2.65
08	405	5.0	28	210	4.2	100	3.00		2.55
09	435	5.4	26	210	4.3	100	3.10		2.60
10	470	5.2	24	205	4.3	100	3.20		2.55
11	425	5.2	24	200	4.4	100	3.20		2.70
12	455	5.4	24	200	4.4	100	3.20		2.55
13	430	5.5	27	205	4.4	100	3.20		2.65
14	465	5.3	26	200	4.3	100	3.20		2.60
15	430	5.3	23	205	4.4	100	3.15		2.50
16	410	5.8	26	210	4.3	100	3.00		2.55
17	420	5.6	27	210	4.2	100	2.90		2.55
18	415	5.5	28	230	4.0	100	2.80		2.65
19	395	5.5	27	220	3.9	100	2.60		2.80
20	(410)	5.8	27	240	3.8	100	2.50		2.90
21	(350)	5.9	29	240	3.7	100	2.30		2.80
22	---	5.3	28	250	---	100	2.20		2.90
23	---	5.6	29	250	---	100	2.10		2.90

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 5

Point Barrow, Alaska (71.3° N, 156.8° W) — May 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.0	17					4.1	2.90
01		(5.3)	19					4.7	2.80
02		(5.4)	19					4.8	(2.80)
03		4.6	20					3.1	2.72
04		4.95	20					2.7	2.75
05		5.0	19						2.65
06		4.9	18						2.50
07		4.7	23						2.30
08		5.0	23						2.30
09		5.2	19						2.40
10		5.3	21						2.40
11		5.2	23						2.50
12		5.5	24						2.55
13		5.7	26						2.52
14		5.9	27						2.60
15		5.85	26						2.65
16		6.0	26						2.65
17		6.25	26						2.68
18		6.1	25						2.75
19		6.0	25						2.75
20		5.4	24						2.85
21		5.1	26					3.2	2.88
22		5.05	24					2.9	2.88
23		5.2	24					4.4	2.85

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 6

Kiruna, Sweden (67.8° N, 20.3° E) — May 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.5	10	335				3.6	(2.6)
01		5.0	13	315		---	----	3.3	2.6
02	---	5.3	16	325	---	---	----	3.0	2.6
03	(355)	5.3	18	300	3.1	---	<2.10	2.4	2.6
04	(400)	5.6	22	255	3.4	110	2.20		2.6
05	440	5.7	23	250	3.7	110	2.40		2.6
06	450	5.8	23	240	4.3	110	2.60		2.6
07	410	5.9	24	240	4.4	110	2.85		2.6
08	410	6.2	26	240	4.6	110	3.00		2.6
09	395	6.3	28	230	4.7	105	3.10		2.6
10	400	6.6	29	225	4.8	105	3.10		2.6
11	400	6.5	29	230	<4.9	105	3.20		2.6
12	360	6.8	29	220	4.9	105	3.20		2.7
13	385	6.8	30	225	4.8	105	3.10		2.6
14	380	6.6	28	220	4.7	105	3.10		2.7
15	400	6.9	26	225	4.7	110	3.00		2.7
16	350	6.8	28	235	4.5	110	<3.00		2.8
17	(340)	6.5	27	240	4.0	110	2.65		2.8
18	(290)	6.4	26	250	3.8	115	2.40		2.8
19	(290)	6.2	26	265	3.3	115	2.20	2.4	2.8
20	---	6.0	24	275		---	<1.90	2.8	2.8
21		5.8	22	300		---	----	3.0	2.7
22		5.5	19	340		---	----	3.2	2.6
23		5.0	13	315				3.2	2.6

Time: 15.0°E.
Sweep: 0.8 Mc to 15.0 Mc in 30 seconds.

Table 7

Sodankyla, Finland (67.4° N, 26.6° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.6)	5	345				(3.7)	(2.65)
01		(5.4)	6	320				(3.4)	(2.60)
02		(5.0)	8	300	---	---	----	(3.2)	(2.70)
03		5.2	10	310	---	---	E	(3.4)	2.60
04		5.7	13	285	3.2	125	2.00	(3.5)	2.60
05		5.7	21	260	3.6	120	2.40	(3.5)	2.65
06		6.0	24	250	3.9	115	2.60	(3.5)	2.70
07		6.0	26	240	4.2	110	2.85	(3.5)	2.55
08		6.2	26	235	4.4	110	3.00	(3.7)	2.65
09		6.6	28	230	4.6	110	3.20	(3.7)	2.65
10		6.8	28	220	4.6	110	3.30	4.0	2.65
11		6.8	29	220	4.8	105	3.40	3.8	2.70
12		7.0	30	215	4.8	110	3.40	4.0	2.70
13		7.0	29	220	4.8	110	3.40	4.0	2.75
14		7.0	29	215	4.7	110	3.35	3.6	2.75
15		6.9	29	220	4.6	110	3.30	3.8	2.75
16		6.9	29	220	4.4	110	3.10	3.6	2.80
17		7.0	28	230	---	115	3.00	(3.5)	2.85
18		7.0	19	240	---	110	2.80	(3.5)	2.90
19		6.7	24	260		115	2.50	(3.5)	2.90
20		6.8	21	265		120	2.30	(3.3)	2.90
21		6.2	20	285		130	2.00	3.3	2.85
22		(6.0)	9	290		130	1.80	(3.0)	(2.85)
23		(5.5)	9	320		---	E	(3.3)	(2.70)

Time: 30.0°E.
Sweep: 1.4 Mc to 22.0 Mc in 8 minutes, automatic operation.

Table 8

Lulea, Sweden (65.6° N, 22.1° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.7	19	300					2.6
01	---	5.6	16	300	---				2.6
02	---	5.1	18	300	---	---	---		2.6
03	(440)	5.3	20	275	3.3	---	2.1		2.6
04	(450)	5.4	19	255	3.6	130	2.4		2.6
05	(465)	5.8	21	250	3.9	115	2.6		2.6
06	480	6.1	21	240	4.2	110	2.9		2.6
07	500	6.3	20	235	4.4	110	3.0		2.6
08	400	6.8	21	230	4.7	110	3.1		2.65
09	365	7.5	20	235	4.8	110	3.3		2.7
10	400	7.4	22	230	5.0	110	3.6		2.7
11	375	7.3	22	225	4.9	105	3.6		2.7
12	380	7.1	24	225	4.9	110	3.4		2.7
13	410	7.2	24	230	4.8	110	3.4		2.7
14	380	7.2	23	225	4.7	110	3.3		2.7
15	430	6.8	22	230	4.6	110	3.2		2.8
16	(450)	7.0	24	240	4.4	110	3.1		2.8
17	---	7.0	21	250	---	115	2.8		2.8
18	---	7.0	25	250	---	120	2.6		2.9
19	---	6.5	23	255	---	---	2.3	2.3	2.9
20		7.0	21	265		---	2.1		2.9
21		6.6	22	270		---	2.1		2.75
22		5.7	19	300		---	---		2.7
23		5.5	20	305				(2.3)	2.6

Time: 15.0°E.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 9

Lycksele, Sweden (64.6° N, 18.8° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.6	24	305		---	----	3.0	2.6
01	---	5.2	21	300	----	125	1.00	3.0	2.6
02	(390)	5.0	24	300	----	110	1.20	2.6	2.6
03	380	4.9	23	290	2.80	---	1.70	2.9	2.6
04	430	5.3	25	260	3.50	110	2.10	3.5	2.65
05	440	5.3	27	250	3.80	110	2.35	3.9	2.6
06	440	5.8	27	245	4.20	105	2.60	3.9	2.7
07	400	6.1	25	230	4.50	105	2.90	3.7	2.6
08	430	6.3	28	230	4.65	105	3.10	4.2	2.65
09	360	6.8	30	225	4.80	105	3.25	4.8	2.7
10	380	7.0	30	220	4.90	105	3.40	4.6	2.7
11	380	7.2	31	210	5.00	105	3.40	4.7	2.6
12	365	7.1	31	210	5.05	105	3.45	3.9	2.7
13	365	7.2	29	215	4.90	105	3.40		2.7
14	380	7.0	29	220	4.90	105	3.30	4.0	2.7
15	370	7.3	29	220	4.90	105	3.20	4.6	2.8
16	350	7.3	29	230	4.60	105	3.00	3.6	2.8
17	315	7.1	29	240	4.40	105	2.70	3.9	2.8
18	(340)	6.9	29	245	4.00	105	2.50	4.0	2.9
19	---	6.5	29	255	----	110	2.10	3.3	2.9
20		6.4	27	265		110	1.80	3.0	2.9
21		6.0	28	280		110	1.40	2.2	2.8
22		5.6	28	300		110	1.20	2.6	2.7
23		5.4	26	300		---	1.05	2.9	2.7

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 16.0 Mc in 6 minutes, automatic operation.

Table 10

Nurmijarvi, Finland (60.5° N, 24.6° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.0)	9						(2.75)
01		5.7	12						2.70
02		5.7	11						2.70
03		5.2	11						2.70
04		5.2	16						2.80
05		5.5	23		---				2.85
06		5.7	20		---				2.75
07		5.8	21		4.2		----		2.80
08		6.8	23		4.5		----		2.75
09		7.4	24		4.9		----		2.80
10		7.8	27		5.0		----		2.90
11		7.8	25		5.0		----		2.85
12		7.8	22		5.0				2.90
13		7.6	25		5.0				2.90
14		7.4	30		5.0				2.90
15		7.5	29		4.9				2.95
16		7.5	28		4.7				2.95
17		7.6	28		---				2.90
18		7.7	29						3.00
19		7.2	26						3.00
20		7.6	24						3.00
21		7.5	21						3.00
22		6.8	13						2.90
23		(6.8)	9						(2.80)

Time: 30.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 1 minute.

Table 11

Upsala, Sweden (59.8° N, 17.6° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.7	26	295		110	0.90	2.5	2.5
01		5.2	26	295		105	----	2.8	2.5
02		5.0	24	310		105	0.90	2.4	2.5
03	---	5.0	29	300	---	105	1.25	3.2	2.5
04	(425)	5.0	29	265	3.3	105	1.80	3.4	2.6
05	465	5.3	27	250	3.8	105	2.30	4.8	2.6
06	440	6.1	29	245	4.2	105	2.65	5.3	2.6
07	425	6.4	28	235	4.5	105	2.90	5.4	2.6
08	370	7.0	29	230	4.8	105	3.10	5.5	2.7
09	360	7.8	31	225	4.9	105	3.30	6.5	2.7
10	355	7.9	31	220	5.0	105	3.40	6.5	2.7
11	355	7.8	31	215	5.0	105	3.50	6.5	2.7
12	360	7.8	30	215	5.1	105	3.50	6.3	2.7
13	360	7.6	31	220	5.0	105	3.50	5.6	2.7
14	345	7.6	31	225	4.9	105	3.40	5.7	2.7
15	360	7.8	31	225	4.9	105	3.25	5.5	2.7
16	325	7.8	30	235	4.6	105	3.10	5.4	2.8
17	(340)	7.8	31	240	4.4	105	2.80	4.8	2.8
18	(350)	7.8	31	245	4.0	105	2.50	4.4	2.8
19	---	7.4	31	255		105	2.20	3.2	2.9
20		7.1	29	260		105	1.60	2.6	2.8
21		7.2	29	255		110	1.20		2.7
22		6.6	30	275		110	1.00	1.1	2.6
23		6.0	29	285		110	0.90		2.6

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 12

Churchill, Canada (58.8° N, 94.2° W) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.0	25	290				4.2	----
01		4.9	27	310		---	----	4.6	
02		4.5	29	280		---	----	3.0	----
03		4.5	26	300		---	----	2.8	----
04	---	4.4	20	300	---	---	2.30		
05	490	4.5	23	270	3.6	115	2.60	2.8	----
06	435	4.9	18	260	4.0	110	2.80		----
07	450	5.1	20	220	4.2	105	3.05		(2.70)
08	470	5.4	20	230	4.5	105	3.20		(2.70)
09	450	5.6	20	220	4.7	100	3.40		2.65
10	475	5.9	25	230	4.7	105	3.70		2.70
11	495	5.9	25	220	4.9	105	3.70		2.65
12	440	6.0	24	215	4.9	105	3.80		2.70
13	455	6.2	24	220	4.9	105	3.70		2.70
14	420	6.5	26	215	4.9	105	3.50		2.65
15	430	6.7	26	220	4.8	105	3.40		2.70
16	400	7.0	26	230	4.6	105	3.20		2.70
17	370	6.9	26	240	4.4	110	3.05		2.85
18	350	6.4	26	250	4.1	110	2.90		2.90
19	---	6.0	26	290	---	110	2.80		2.85
20		5.8	25	300		130	2.40	3.1	(3.00)
21		5.6	27	300		---	----	4.7	----
22		5.2	28	305		---	----	4.6	----
23		5.2	26	290				4.6	

Time: 90.0°W.
Sweep: 1.0 Mc to 17.0 Mc in 16 seconds.

Table 13

Inverness, Scotland (57.4° N, 4.2° W) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.8	30	300				<1.3	2.55
01		5.3	29	300				1.0	2.55
02		5.1	28	310				<1.0	2.50
03		4.5	30	300		---	----	<1.3	2.50
04	---	4.4	30	300		120	1.75		2.60
05	(410)	4.9	31	260	---	120	2.20		2.70
06	(500)	5.5	29	250	3.8	115	2.55		2.80
07	(500)	6.0	30	250	4.2	110	2.90		2.80
08	400	6.8	30	230	4.4	110	3.15		2.80
09	420	6.9	31	220	4.6	105	3.30		2.85
10	430	7.2	30	220	4.6	105	3.50		2.80
11	435	7.8	30	220	4.7	105	3.60		2.80
12	410	7.2	31	220	4.9	105	3.70		2.80
13	435	7.0	31	220	5.0	105	3.70		2.80
14	420	7.0	30	230	4.7	105	3.60		2.80
15	425	7.4	28	225	4.8	105	3.50		2.80
16	(400)	7.4	30	240	---	110	3.30		2.80
17	(400)	7.6	31	250	---	110	3.10		2.80
18	---	7.6	31	250		110	2.75		2.85
19		7.1	30	250		120	2.40	2.5	2.90
20		>7.0	31	255		130	2.00		2.90
21		7.3	31	260				<1.7	2.80
22		6.8	30	280				<1.6	2.65
23		6.3	30	300				<1.6	2.60

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 14

DeBilt, Holland (52.1° N, 5.2° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.0	27	290					2.70
01		5.9	29	300					2.70
02		5.4	28	300					2.70
03		4.8	28	300					2.75
04	---	5.1	29	280	---	---	1.9		2.85
05	(550)	5.6	28	250	3.7	<135	2.3	2.3	3.00
06	370	6.0	28	240	4.2	110	2.7	3.2	2.95
07	355	6.8	30	230	4.5	110	3.1	3.6	2.95
08	310	7.0	30	220	4.8	110	3.3	3.7	3.00
09	315	8.1	29	210	5.0	105	3.5	4.0	3.00
10	340	8.2	27	210	5.2	100	3.7	4.0	2.95
11	330	8.5	29	220	5.1	100	3.7	4.2	2.90
12	355	7.9	28	210	5.2	100	3.7	4.0	2.95
13	365	7.9	30	215	5.2	100	3.6	4.0	3.00
14	345	7.8	30	225	5.0	110	3.6	3.7	3.00
15	360	7.7	31	230	4.9	110	3.5	3.7	2.95
16	325	8.0	31	240	4.7	110	3.2		3.00
17	300	8.1	28	250	---	110	2.9	3.5	3.00
18	---	8.2	27	260		<125	2.4	3.0	3.10
19		8.0	27	260		---	2.0	3.0	3.10
20		7.8	27	250				1.0	3.05
21		7.4	26	260					2.90
22		7.0	26	275					2.80
23		6.6	28	290					2.75

Time: 0.0°.
Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 15

Adak, Alaska (51.9° N, 176.6° W) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>5.0	27	280					2.70
01		4.8	29	300					2.70
02		4.75	26	305				1.5	2.65
03		4.5	24	320				1.6	2.60
04	435	4.4	30	315	2.8	130	1.75	2.0	2.50
05	455	5.1	29	265	3.5	113	2.25	2.5	2.48
06	435	5.7	30	(255)	3.9	104	2.70	3.3	2.52
07	410	6.3	30	(255)	4.2	103	3.00	3.8	2.60
08	420	6.1	27	225	4.5	100	3.20	4.0	2.62
09	440	6.2	26	220	4.7	100	3.40	4.2	2.60
10	470	6.15	28	(220)	4.8	100	3.50	4.5	2.62
11	400	6.0	29	215	4.9	100	(3.60)	4.3	2.55
12	445	6.0	29	210	5.0	100	3.60	4.2	2.65
13	465	6.2	26	220	4.9	100	3.60	4.1	2.62
14	430	6.15	30	220	4.8	100	3.50	3.7	2.75
15	410	6.3	29	225	4.8	102	3.40	3.6	2.75
16	405	6.3	30	230	4.6	102	3.10	3.6	2.85
17	(365)	6.45	30	240	---	103	2.88	3.4	2.92
18	(325)	6.4	29	(260)		110	2.50	3.4	2.95
19	---	6.8	29	270		122	1.90	2.8	3.00
20		6.85	30	260		---	----	2.6	2.95
21		6.7	30	260				2.0	2.90
22		6.1	28	260					2.80
23		5.7	28	275					2.75

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 16

Slough, England (51.5° N, 0.6° W) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.5	30	290				<1.2	2.60
01		6.2	30	290				1.0	2.55
02		5.8	30	300				1.0	2.55
03		5.4	30	305		---	1.00	<1.1	2.55
04		5.1	31	300		115	1.40	1.7	2.60
05	400	5.3	31	255	3.4	120	2.10	2.2	2.70
06	450	5.8	30	245	3.9	105	2.60	2.8	2.80
07	405	6.6	31	240	4.4	105	3.00	3.2	2.85
08	490	7.6	29	225	4.6	105	3.30	3.7	2.80
09	370	7.8	30	215	4.8	100	3.50	3.9	2.85
10	380	8.1	31	210	5.0	100	3.60	4.2	2.80
11	355	7.9	31	210	5.1	100	3.70	4.0	2.80
12	380	7.8	31	210	5.1	100	3.75	4.0	2.80
13	365	7.9	29	220	5.2	100	3.70	4.2	2.80
14	360	7.8	29	215	5.0	100	3.60	3.8	2.80
15	400	7.8	30	225	4.8	100	3.50	3.8	2.80
16	350	8.1	31	235	4.8	105	3.30	3.5	2.90
17	---	8.5	29	245	---	105	2.90	3.6	2.90
10		8.6	29	250		105	2.55	3.3	2.90
19		8.6	30	255		120	2.10	2.8	2.95
20		8.3	31	255		---	<1.60	2.3	2.90
21		7.8	31	<245				<1.6	2.80
22		7.1	31	<250				<1.6	2.65
23		7.0	30	<275				<1.6	2.60

Time: 0.0°.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 17

Winnipeg, Canada (49.9° N, 97.4° W) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.4	24	300					2.70
01		4.2	23	325				2.4	2.70
02		4.0	25	310				2.1	(2.70)
03		3.8	24	330					(2.65)
04		3.6	23	320					2.70
05	---	4.0	27	300	---	110	2.00		2.80
06	430	4.6	27	260	3.7	110	2.40		2.70
07	430	5.1	23	230	4.0	105	2.80		2.80
08	445	5.5	27	220	4.4	100	3.10		2.70
09	425	5.6	28	210	4.7	100	3.30		2.70
10	490	5.7	27	210	4.8	100	3.50		2.70
11	460	6.0	28	200	4.9	100	3.70		2.70
12	495	6.1	25	210	5.0	100	3.80		2.60
13	450	6.3	29	210	5.0	100	3.80		2.70
14	430	6.3	29	215	5.0	100	3.80		2.70
15	400	6.4	28	220	4.9	100	3.60		2.70
16	400	6.6	28	220	4.9	100	3.40		2.75
17	390	6.8	29	230	4.5	105	3.10		2.70
18	340	6.8	29	240	4.1	110	2.80		2.80
19	(360)	6.9	30	260	---	120	2.30		2.90
20		6.8	30	275		140	2.00		2.85
21		6.4	29	260					2.70
22		5.6	26	280				2.4	2.80
23		4.9	23	290				2.2	2.75

Time: 90.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 18

St. John's, Newfoundland (47.6° N, 52.7° W) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.8	29	300					2.60
01		4.4	27	300					2.55
02		4.0	26	300					2.55
03		3.6	26	310					2.55
04		4.0	28	300		---	----		2.75
05	(518)	4.8	30	265	3.5	121	2.40		2.90
06	446	5.2	30	245	4.0	114	2.90		2.90
07	402	5.5	31	240	4.3	110	3.20		2.90
08	415	5.8	31	230	4.7	110	3.50		2.80
09	402	6.0	31	230	4.8	110	3.70		2.80
10	430	6.4	28	224	5.0	110	3.80		2.75
11	432	6.6	27	231	5.0	110	3.85		2.75
12	400	6.6	30	224	5.0	110	3.80		2.70
13	408	6.4	31	228	5.0	110	3.80		2.70
14	406	6.8	31	231	5.0	110	3.70		2.75
15	378	7.0	29	234	4.8	110	3.50		2.70
16	360	7.0	31	242	4.5	110	3.20		2.75
17	346	7.3	31	258	---	120	2.90		2.75
18	(320)	7.5	31	272		123	2.50		2.80
19		7.7	31	275		---	----		2.80
20		7.4	30	270					2.70
21		6.8	29	275					2.60
22		6.2	28	295					2.60
23		5.3	27	300					2.60

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 19

Sottens, Switzerland (46.6° N, 6.7° E) May 1960

Time	h'F2	foF2	Count	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	6.8	27						2.7
01	300	6.7	25						2.7
02	300	6.4	26						2.7
03	300	5.8	25						2.7
04	300	5.6	26						2.7
05	300	5.4	26	300	2.8	140	1.7		2.8
06	280	6.0	27	260	3.6	120	2.2	3.1	2.9
07	280	6.9	19	240	4.3	110	2.7	3.7	3.0
08	300	7.5	15	240	4.6	100	3.1	4.2	3.1
09	320	8.2	24	230	5.0	100	3.3	4.3	3.0
10	300	8.6	21	230	5.2	100	3.4	5.1	3.0
11	330	8.4	20	220	5.2	100	3.6	5.0	2.9
12	340	8.3	20	200	5.4	100	3.6	4.2	2.9
13	340	8.4	22	220	5.3	100	3.6	4.3	2.9
14	340	8.4	24	220	5.3	100	3.6		2.9
15	330	8.4	27	230	5.3	100	3.5	3.8	2.9
16	330	8.3	23	240	5.0	100	3.4	4.0	2.9
17	320	8.1	21	240	4.7	100	3.1	4.0	3.0
18	290	8.4	18	260	4.3	110	2.7	4.1	3.0
19	280	8.0	20	---	---	120	2.2	3.9	3.0
20	260	8.2	20			---	---	3.4	3.1
21	260	7.8	20					3.1	2.9
22	260	7.3	23						3.0
23	290	7.0	21						2.8

Time: 15.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 20

Ottawa, Canada (45.4° N, 75.9° W) May 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.2	29	300					2.70
01		4.2	28	300					(2.85)
02		4.2	29	310					----
03		4.0	27	300					----
04		3.5	29	300					----
05	---	4.2	30	280	---	120	2.0		3.00
06	(480)	5.0	30	250	3.9	110	2.6		3.00
07	440	5.2	31	235	4.2	110	3.0		3.00
08	460	5.8	30	230	4.6	110	3.2	3.6	2.90
09	430	5.8	30	210	4.8	105	3.5	3.5	3.00
10	440	5.9	31	210	5.0	105	3.6	3.8	2.80
11	490	6.0	31	210	5.0	105	3.8	3.8	2.80
12	455	6.0	30	210	5.0	105	4.0		2.70
13	440	6.3	31	220	5.0	105	3.8		2.80
14	410	6.5	31	220	5.0	105	3.7		2.80
15	400	6.7	31	220	5.0	105	3.5		2.80
16	375	6.8	31	220	4.8	110	3.3		2.80
17	345	7.0	31	245	(4.3)	110	3.0		2.80
18	305	7.2	31	260	3.9	110	2.6	2.7	2.90
19	---	7.2	31	280		115	2.0		2.95
20		7.2	29	255					2.90
21		6.8	29	260					2.85
22		6.0	28	290					2.85
23		5.1	29	<300					(2.80)

Time: 75.0°W.
Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 21

Wakkanai, Japan (45.4° N, 141.7° E) May 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.0	25	300					2.60
01		6.8	26	295					2.60
02		6.2	26	290					2.65
03		6.0	27	290					2.65
04		6.2	27	290			1.40	1.8	2.65
05	(470)	6.6	27	260	3.5		2.20		2.70
06	430	7.3	27	255	4.0		2.75	3.5	2.70
07	360	7.5	27	250	4.4		3.15	4.1	2.70
08	365	7.3	27	245	4.7		3.40	5.0	2.70
09	390	6.7	26	(240)	5.0		3.50	5.0	2.70
10	390	7.2	22	230	5.0		3.60	4.7	2.70
11	400	7.4	21	240	5.3		3.60	4.6	2.65
12	390	7.4	23	230	5.3		3.55	4.3	2.65
13	380	7.6	23	230	5.3		3.50		2.65
14	360	7.7	27	235	5.2		3.50	4.0	2.75
15	340	7.6	27	240	4.9		3.40	3.6	2.80
16	360	7.5	25	250	4.6		3.10	4.2	2.80
17	(360)	7.3	27	260			2.70	3.9	2.80
18		7.8	27	275			2.10	3.9	2.85
19		8.3	27	275				(4.2)	2.80
20		8.0	26	275				3.1	2.70
21		7.7	26	275				2.8	2.70
22		7.3	24	290					2.65
23		7.3	26	290					2.65

Time: 135.0°E.
Sweep: 1.0 Mc to 20.7 Mc in 1 minute.

Table 22

Genoa (Monte Capellino), Italy (44.6° N, 9.0° E) May 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.6	30	310					
01		7.4	30	310					
02		7.1	31	310					
03		6.8	31	310					
04		6.5	31	310					
05		6.2	30	295			1.3	1.8	
06		7.0	31	260			2.1	2.4	
07		7.6	30	240			2.7	3.3	
08		8.1	30	235			3.1	3.8	
09		8.5	29	220			3.4	4.1	
10		8.8	31	215			3.6	4.3	
11		8.9	28	215			3.7	4.3	
12		9.2	30	220			3.8	4.3	
13		9.4	30	220			3.8	4.2	
14		9.2	31	225			3.7	4.2	
15		9.2	31	230			3.5	4.1	
16		8.9	31	230			3.3	3.9	
17		8.8	30	245			3.0	3.6	
18		9.2	31	260			2.6	3.8	
19		10.1	31	275			1.8	2.9	
20		9.7	31	255				3.1	
21		8.8	31	260				3.4	
22		8.2	31	275				1.7	
23		7.7	30	300				1.7	

Time: 15.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 5 minutes, automatic operation.

Table 23

Rome, Italy (41.8° N, 12.5° E) May 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(7.9)	17	300					(2.65)
01		(7.1)	21	300				2.6	(2.65)
02		(6.6)	22	290					(2.60)
03		(6.5)	24	290					(2.70)
04		(6.3)	29	280					(2.80)
05		(6.4)	27	260		140	1.7	2.5	(2.80)
06	---	(7.2)	26	240	---	110	2.3	3.2	(3.05)
07	---	(7.9)	24	240	---	110	2.8	3.6	(3.10)
08	---	(8.3)	23	220	---	110	3.2		(3.00)
09	---	8.4	20	220	---	110	3.5		3.05
10	---	8.9	23	210	---	100	3.6	4.4	2.90
11	---	(9.2)	21	200	---	100	3.8	4.4	(2.90)
12	(350)	9.3	23	200	(5.3)	110	(3.8)		2.80
13	---	9.5	23	220	---	110	3.8		2.85
14	---	(9.3)	15	220	---	110	3.7		(2.95)
15	---	9.3	19	230	---	110	3.6		3.10
16	---	9.0	20	240	---	110	3.4		3.00
17	---	8.8	20	250	---	110	3.1		3.10
18		8.8	17	260		110	2.5	4.4	3.00
19		(8.8)	12	250		---	---	3.8	(3.10)
20		(8.6)	11	240				3.4	2.90
21		(8.7)	20	240				3.2	(2.90)
22		(8.2)	22	250				3.6	(2.70)
23		(7.9)	21	280				2.8	(2.70)

Time: 15.0°E.
Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 24

Akita, Japan (39.7° N, 140.1° E) May 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.6	30	300				2.3	2.70
01		7.4	30	295				(2.1)	2.70
02		6.8	30	290				2.1	2.70
03		6.5	30	275				2.1	2.70
04		6.4	30	295				2.1	2.65
05	(350)	7.3	31	250	---		2.00	2.2	2.80
06	320	8.0	31	245	4.1		2.65	3.4	2.95
07	295	8.5	30	245	4.4		3.05	4.2	2.90
08	305	8.3	29	245	4.7		3.40	(4.9)	2.80
09	320	8.3	29	240	5.2		3.55	(5.0)	2.75
10	340	8.5	29	230	5.2		3.70	5.1	2.75
11	350	8.2	29	220	5.3		(3.80)	(5.0)	2.75
12	360	8.6	30	220	5.4		3.80	4.6	2.75
13	350	9.0	30	230	5.2		(3.80)	4.6	2.75
14	330	9.0	30	230	5.2		3.70	4.4	2.80
15	310	9.2	30	245	5.0		3.50	4.4	2.85
16	310	8.8	30	240	4.7		3.20	(4.0)	2.90
17	300	8.6	30	250	---		2.75	(4.0)	2.90
18	(290)	8.8	30	260			2.05	(4.0)	2.95
19		8.7	30	260				(3.8)	2.90
20		8.2	29	260				(3.8)	2.75
21		7.9	29	275				(4.6)	2.70
22		7.8	28	300				(3.8)	2.70
23		7.9	27	300				(2.2)	2.70

Time: 135.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 20 seconds.

Table 25

Tokyo, Japan (35.7° N, 139.5° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.9	31	305				(3.4)	2.65
01		7.7	31	300				(2.7)	2.70
02		7.2	31	280				2.6	2.70
03		6.6	31	280			----	(2.2)	2.65
04		6.4	31	290			----	1.7	2.65
05	---	7.3	31	255	---		2.00		2.80
06	(395)	8.5	31	250	4.3		2.60	3.4	3.00
07	305	8.6	31	250	---		3.05	4.2	3.00
08	310	8.6	31	245	---		3.35	(5.0)	2.80
09	320	8.6	30	220	5.6		3.60	5.4	2.70
10	330	9.0	30	240	5.6		(3.70)	(5.6)	2.65
11	350	9.6	30	(230)	5.6		(3.80)	5.6	2.65
12	350	9.8	30	245	5.6		(3.85)	5.0	2.70
13	350	10.1	31	230	5.4		(3.85)	4.5	2.75
14	320	10.8	31	235	5.4		3.70	4.5	2.80
15	310	11.0	31	245	5.2		3.55	4.4	2.85
16	305	10.4	31	245	4.8		3.20	3.9	2.80
17	300	9.7	29	250	---		2.70	4.1	2.90
18	---	9.4	29	260			2.00	(4.7)	2.90
19		9.1	30	250				(3.3)	2.85
20		8.4	30	265				(4.1)	2.65
21		8.0	31	305				(3.8)	2.60
22		8.0	31	310				(4.4)	2.60
23		8.1	31	310				(3.5)	2.60

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 20 seconds.

Table 26

Yamagawa, Japan (31.2° N, 130.6° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.1	23	315				3.0	2.60
01		(9.2)	24	300				(2.7)	(2.70)
02		8.7	25	275				(2.8)	2.80
03		7.6	25	280				2.3	2.75
04		6.8	26	280				2.3	2.70
05		7.0	25	290				2.2	2.75
06	---	7.8	28	250			2.15	2.7	3.05
07	---	8.4	29	245	---		2.80	3.6	3.10
08	(400)	8.4	28	(250)	(4.8)		3.25	5.1	2.95
09	(460)	8.7	29	250	5.1		3.50	5.2	2.65
10	410	9.8	30	250	5.4		3.70	5.8	2.60
11	375	10.2	30	250	5.7		3.80	5.4	2.60
12	350	10.7	30	240	5.6		3.90	5.2	2.70
13	350	11.3	29	250	5.7		3.90	5.6	2.75
14	345	11.8	29	250	5.4		3.90	5.3	2.75
15	325	12.2	29	255	5.4		3.70	5.0	2.85
16	310	12.0	29	250	5.1		3.45	5.0	2.85
17	(300)	11.6	30	(260)	---		3.10	4.9	2.85
18	---	11.6	31	(275)	---		2.30	4.9	2.90
19		10.9	29	265				4.7	2.90
20		(9.2)	27	285				(5.0)	(2.75)
21		(8.7)	26	300				5.0	(2.60)
22		8.9	27	320				(3.8)	2.60
23		9.2	24	315				(4.5)	2.60

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 30 seconds.

Table 27

El Cerillo, Mexico (19.3° N, 99.5° W) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.8	28	300				2.4	2.75
01		7.8	28	280				2.1	2.80
02		7.4	29	270				1.9	2.90
03		7.6	29	260				2.1	2.90
04		6.8	29	260				2.0	3.00
05		6.0	30	245					3.00
06		5.8	30	260	---			2.3	3.00
07		7.1	30	230	---	108	2.40	2.8	3.20
08		7.8	30	215	---	104	3.00	3.4	2.90
09		9.0	29	200	---	103	3.40	3.7	2.75
10		9.8	29	210	---	104	3.55	4.0	2.70
11		10.9	28	210	5.6	103	3.80	3.8	2.65
12		11.5	29	210	5.7	103	3.90	4.2	2.70
13		12.0	28	220	5.5	103	3.85	4.6	2.70
14		12.4	29	220	5.4	103	3.85	4.4	2.80
15		12.6	28	215	5.3	103	3.70	4.4	2.90
16		12.2	28	250	---	103	3.50	4.6	2.90
17		11.8	29	240		103	3.10	4.5	3.00
18		11.4	29	250		109	2.40	4.3	3.05
19		10.2	28	240				4.2	3.00
20		10.0	27	245				4.1	2.90
21		9.4	28	260				3.3	2.80
22		8.5	28	270				3.0	2.80
23		8.0	28	280				2.2	2.75

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 28

Bunia, Belgian Congo (1.5° N, 30.2° E) May 1960

Time	h'F2	foF2—Count		h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	(250)	(10.0)	2					2.0	----
01	(235)	(7.8)	5					2.7	(2.86)
02	225	(6.2)	5					2.8	(3.08)
03	(230)	(5.0)	6					2.8	(3.15)
04	250	(6.4)	8	---		---	---	3.5	(3.08)
05	---	(9.4)	8	240		120	2.6	(3.6)	(2.92)
06	---	(11.8)	8	235		---	3.1	(4.0)	(2.84)
07	---	(13.0)	8	240		---	3.5		(2.70)
08	---	(13.0)	8	225		---	3.8		(2.52)
09	---	(14.0)	9	240	---	---	3.9		(2.43)
10	---	(14.0)	8	260	---	---	---	(3.0)	(2.41)
11	---	(14.7)	9	250	---	110	---		<2.30
12	---	(14.0)	7	250	---	---	---		(2.29)
13	---	(14.0)	8	250		110	---	3.4	(2.30)
14	---	>14.4	7	240		---	---	(3.5)	(2.38)
15	---	(14.5)	5	255		---	---	(3.3)	<2.47
16	---	(14.0)	4	270				(3.0)	----
17	(310)	(14.0)	3					(3.0)	----
18	(310)	(13.6)	1					(1.9)	----
19	(240)	----	0					(2.0)	
20	(250)	(13.0)	1					(2.0)	----
21	(230)	>13.3	2					(2.1)	----
22	(230)	(14.1)	2					(2.6)	----
23	(220)	(11.3)	4					(2.4)	----

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 29

Singapore, British Malaya (1.3° N, 103.8° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		12.8	24	230		---		2.8	3.15
01		10.6	28	225		---			3.20
02		8.2	29	(230)		---			3.20
03		6.4	28	(220)		---		1.4	3.15
04		5.4	27	230		---			3.10
05		4.6	27	235		---	----	1.1	3.20
06	---	5.9	28	270	---	120	1.50		2.95
07	---	9.6	28	250	---	120	2.60		2.95
08	---	12.5	31	230	---	110	3.20		2.85
09	---	13.6	29	215	---	110	3.55		2.80
10	300	14.2	28	215	---	110	3.80		2.50
11	290	14.2	26	210	5.5	105	4.00		2.40
12	290	13.8	24	205	5.4	110	(4.05)		2.25
13	260	13.3	22	205	5.4	110	(3.95)		2.20
14	300	13.2	22	205	---	105	3.80		2.30
15	245	12.8	25	210	---	105	3.50	3.6	2.35
16	---	12.9	27	235	---	110	3.15	3.4	2.40
17	---	13.0	24	250	---	115	2.65		2.45
18	---	13.6	26	265	---	---	----	2.9	2.55
19		13.5	25	290		---		2.4	2.60
20		13.6	23	290		---			2.70
21		13.8	16	240		---		1.9	2.80
22		12.5	21	220		---		1.9	2.80
23		12.6	22	220		---		1.6	2.95

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 30

Lwiro, Belgian Congo (2.3° S, 28.8° E) May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(12.8)	24	220					3.02
01		>12.2	26	215					3.02
02		>9.5	24	220					3.06
03		8.3	24	220				(1.8)	3.18
04		6.4	23	220				(1.8)	3.18
05		4.8	24	220				(1.6)	3.06
06	---	6.0	25	260		---	E	(1.6)	3.04
07	250	9.6	23	240		121	2.50		3.21
08	260	11.5	26	230		113	3.10		3.17
09	265	12.0	25	220	---	111	3.50		3.10
10	280	12.3	25	210	5.0	111	3.75		2.95
11	310	>12.4	24	205	5.0	109	3.90		2.87
12	330	>12.5	26	200	---	109	4.00		2.77
13	330	(12.7)	24	200	---	109	3.90		2.70
14	340	(12.8)	23	210	---	111	3.75		2.65
15	355	>13.5	26	220		111	3.50		2.65
16	340	>13.0	26	230		111	3.10	(3.7)	2.70
17	320	>13.3	26	250		115	2.55	(3.4)	2.70
18	---	(13.5)	27	260				(2.9)	(2.85)
19		>13.7	26	265				(2.4)	----
20		>13.4	27	250				(2.1)	----
21		>13.2	25	215				(1.6)	----
22		>13.5	21	210				(1.6)	(2.77)
23		(13.6)	21	220				(1.6)	----

Time: 30.0°E.
Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 31

Leopoldville, Belgian Congo (4.4° S, 15.2° E) — May 1960

Time	h'F2	foF2—Count		h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	(12.5)	9						(2.86)
01	210	6.8	14						2.82
02	220	5.0	18					2.0	2.86
03	235	4.0	22					1.6	2.72
04	240	3.1	24					2.0	2.86
05	260	5.4	26			145	---	2.4	2.86
06	250	8.6	16	250		120	2.6	3.0	2.98
07	270	10.6	19	235		115	3.1	3.8	2.81
08	285	12.0	25	230		110	3.6	4.0	2.74
09	290	12.6	26	230	---	110	3.8	4.0	2.62
10	(300)	13.2	16	250		110	4.0		2.60
11	330	13.4	20	235		110	---		2.53
12	325	14.0	24	250		110	---		2.48
13	330	14.5	24	250		110	3.6		<2.49
14	335	14.4	24	250		110	3.5	3.7	2.46
15	---	14.5	21	250		115	3.0	3.9	2.46
16	---	15.0	13	250		120	2.4	3.5	2.53
17	255	>15.0	9	250				3.0	(2.54)
18	260	>15.0	3					2.4	----
19	245	----	0					2.0	
20	220	(12.5)	1						----
21	225	(13.6)	1						----
22	230	(15.0)	3						----
23	230	13.4	10						2.86

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 32

Elisabethville, Belgian Congo (11.6° S, 27.5° E) — May 1960

Time	h'F2	foF2—Count		h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	4.1	28						2.88
01	240	3.3	29						3.03
02	250	2.5	27						2.91
03	260	2.5	30						2.86
04	265	3.6	30			---	---		2.74
05	245	8.0	28	250		125	2.2	2.5	3.09
06	250	10.0	31	240		115	3.0		3.02
07	260	11.0	30	230		110	3.3		2.94
08	260	11.1	30	230		110	3.6		2.88
09	280	11.3	30	230		110	3.8		2.74
10	285	12.0	29	240	---	110	3.9		2.68
11	300	11.6	30	250	---	110	4.0		2.61
12	300	12.0	28	250	---	110	3.6		2.58
13	300	12.2	31	240		110	3.4	3.5	2.60
14	(280)	11.7	31	250		115	3.0	3.7	2.62
15	260	11.8	29	250		120	2.5	3.6	2.68
16	240	12.0	27					3.0	2.87
17	230	10.8	23					2.8	2.93
18	225	>9.0	19					2.6	2.95
19	230	6.3	19					2.3	<2.89
20	240	6.0	15					1.9	2.93
21	230	5.5	24						2.90
22	250	4.5	21						2.73
23	250	4.0	24						2.70

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 33

Brisbane, Australia (27.5° S, 152.9° E) — May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.4	14	260					2.65
01		4.6	14	280				1.7	2.65
02		4.6	13	(290)				3.2	2.65
03		4.7	13	260				2.5	2.80
04		4.4	12	(250)				1.9	2.60
05		4.2	12	(250)				>2.1	2.85
06		4.2	12	250			----		2.90
07		7.3	12	240			2.30	2.5	3.30
08		9.1	13	230			2.80	3.0	3.15
09		10.2	10	230			3.15	(3.7)	3.20
10		10.4	10	(240)			3.30	(4.4)	3.05
11		(10.8)	9	(230)			3.50	(4.4)	(3.10)
12		10.4	10	(230)			3.50	(5.4)	3.05
13		(10.1)	9	(220)			3.50	(4.4)	(2.85)
14		(11.1)	7	(230)			3.30	(3.6)	(2.95)
15		(10.3)	7	(230)			----	(4.8)	(2.95)
16		(10.0)	6	(240)			----	(4.4)	(3.00)
17		8.9	10	240			----	(4.9)	2.95
18		7.7	12	230				3.4	3.00
19		6.5	15	240				2.0	2.85
20		6.4	15	240					2.85
21		5.5	14	250					2.75
22		5.1	15	250					2.80
23		5.0	15	250					2.80

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 34

Falkland Is. (51.7° S, 57.8° W) — May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.4	28	340				(1.3)	2.50
01		3.4	29	335				(1.6)	2.50
02		3.4	28	325				1.2	2.50
03		3.2	29	320					2.55
04		3.4	25	300				(1.7)	2.60
05		3.4	23	255					(2.75)
06		3.0	20	235		---	----		(2.70)
07		(4.8)	9	250		---	E		----
08		7.3	26	220		125	1.70	2.2	3.55
09		8.4	28	215		120	2.40	2.7	3.55
10		9.2	27	225		120	2.80	3.0	3.35
11		10.2	28	225		115	2.95	(3.4)	3.25
12		10.2	29	230		115	2.95	3.2	3.45
13		9.6	26	220		115	2.90	3.1	3.40
14		9.4	30	225		120	----	2.6	3.45
15		8.7	28	225		125	2.35	2.4	3.50
16		7.4	25	215		---	E	(2.6)	3.60
17		5.8	21	210		---	----	(2.6)	(3.25)
18		4.6	22	220				(2.5)	----
19		(3.3)	17	230				(2.2)	----
20		2.9	26	250					2.80
21		3.0	28	270					2.70
22		3.1	28	<315					2.50
23		3.1	29	<310					2.45

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 35

Upsala, Sweden (59.8° N, 17.6° E) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		4.0	22	315		105	----	2.2	2.5
01		4.0	20	320		110	(0.80)	2.2	2.5
02		4.2	19	310		110	0.90	2.3	2.5
03		4.0	21	315		110	0.90	2.5	2.5
04		3.9	26	310		(110)	1.40	2.4	2.6
05	---	4.0	28	275	---	105	1.80	2.8	2.75
06	G	4.7	28	255	3.5	105	2.30	3.0	2.8
07	500	5.2	30	245	4.0	105	2.60	3.1	2.8
08	480	5.4	29	235	4.4	105	2.90	3.4	2.7
09	430	6.2	29	225	4.6	105	3.10		2.7
10	450	6.4	29	225	4.6	105	3.20		2.7
11	375	6.9	29	225	4.7	105	3.35	3.6	2.7
12	410	6.9	29	225	4.8	105	3.35	3.4	2.7
13	380	7.2	29	230	4.7	105	3.35		2.8
14	350	7.6	28	230	4.7	105	3.25		2.8
15	(360)	7.6	28	235	4.6	105	3.10		2.8
16	---	7.8	27	240	---	105	2.85		2.8
17	---	8.0	27	245	---	105	2.50	3.1	2.8
18		7.9	27	255		105	2.20	2.6	2.9
19		7.3	25	255		105	1.60	2.3	2.9
20		6.4	26	255		105	1.20	2.1	2.8
21		5.9	25	265		105	1.00		2.7
22		5.0	23	280		110	0.95		2.6
23		4.2	24	310		105	----	1.8	2.6

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 36

Moscow, U. S. S. R. (55.5° N, 37.3° E) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.9	28	320			----	<1.3	2.55
01		4.6	29	320			----	<1.2	2.50
02	---	4.2	27	300			----		2.60
03	---	4.0	27	300	---		----	<1.2	2.65
04	---	4.0	28	290	---		1.30		2.75
05	G	4.3	30	260	2.9		2.00		2.90
06	530	5.1	30	250	4.0		2.40		2.95
07	335	5.4	30	240	4.2		2.85		2.80
08	365	6.6	30	230	4.4		3.10		2.90
09	330	7.6	30	225	4.6		3.25		2.80
10	310	8.5	30	220	4.8		3.40		2.80
11	320	9.1	29	225	4.8		3.50		2.75
12	300	9.5	29	220	5.0		3.50		2.80
13	300	9.3	29	225	4.8		3.40		2.85
14	290	9.4	28	225	5.0		3.30		2.85
15	280	9.0	28	230	4.6		3.10		2.90
16	(270)	8.8	28	240	---		2.80	1.7	2.90
17	(280)	8.9	29	250	---		2.50	2.5	2.90
18	---	8.8	29	250			1.90	2.0	2.95
19		8.4	28	250			1.20	1.7	2.90
20		7.6	28	250			----	<1.6	2.85
21		6.8	28	250			----	<1.2	2.80
22		5.9	28	275			----	<1.4	2.70
23		5.2	28	295			----	<1.3	2.60

Time: 30.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 37

Rome, Italy (41.8° N, 12.5° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	24	310					2.55
01		(6.5)	23	310					(2.50)
02		(6.2)	24	310					(2.50)
03		5.8	25	300					2.60
04		(5.2)	26	300					(2.60)
05		5.3	27	300		---	----		2.65
06		(5.7)	25	260		140	2.10		(2.80)
07	---	(6.7)	19	250	---	120	2.70		(3.10)
08	(360)	(7.8)	23	240	4.4	110	3.10		(3.10)
09	(440)	8.8	24	230	4.8	110	3.40		2.90
10	---	9.0	23	220	---	110	3.60		2.90
11	---	(10.4)	26	220	---	110	3.60		(2.80)
12	---	(11.2)	27	220	---	110	3.80		(2.80)
13	---	11.3	27	220	---	110	3.80		2.80
14	---	(11.3)	25	240	---	110	3.70		(2.80)
15	---	(10.5)	23	240	---	110	3.60		2.85
16		(10.2)	24	250		110	3.30		(2.90)
17		9.4	12	250		120	2.90		2.90
18		(9.1)	9	260		130	2.20	3.4	(3.00)
19		(8.6)	8	250		---	----	2.9	(2.90)
20		(8.2)	17	250				2.8	(2.85)
21		(8.4)	21	260					(2.70)
22		(7.2)	23	290					(2.65)
23		(6.7)	23	310					(2.55)

Time: 15.0°E.
Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 30

El Cerillo, Mexico (19.3° N, 99.5° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.4	25	285				2.5	2.75
01		7.1	26	270				3.0	2.90
02		7.1	26	260				3.5	3.00
03		6.4	26	250				2.4	2.80
04		5.9	26	270				2.3	2.70
05		5.8	26	270				2.2	2.90
06		5.4	26	275				2.4	2.80
07		7.0	28	240		119	2.20	2.5	3.10
08		9.0	28	230		105	2.90	3.3	3.10
09		9.6	29	220		103	3.30	3.9	3.00
10		11.0	26	215		105	3.65	4.0	2.80
11		11.6	26	220		104	3.75	4.0	2.80
12		12.0	26	220		105	4.00	4.4	2.80
13		13.0	27	220		108	3.90	4.5	2.80
14		13.2	26	220		107	3.90	4.4	2.80
15		13.4	26	230		106	3.70	4.5	2.90
16		13.0	26	250		105	3.40	4.3	2.90
17		12.0	27	245		109	3.00	4.2	3.00
18		11.7	24	245		109	2.35	4.0	3.05
19		11.0	23	235				4.0	3.10
20		9.7	24	240				3.0	2.90
21		8.6	25	245				2.2	2.85
22		7.9	24	270				2.8	2.70
23		7.6	25	295				2.8	2.70

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 39

Bunia, Belgian Congo (1.5° N, 30.2° E) April 1960

Time	h'F2	foF2	Count	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	10.2	13					3.0	2.80
01	240	10.0	13					2.3	2.96
02	230	8.5	17					3.0	3.08
03	220	5.2	16					3.0	3.06
04	250	5.6	20			---	---	3.2	2.94
05	250	9.9	25	250		120	2.6	3.8	2.92
06	---	11.2	26	240		120	3.2	4.8	2.78
07	---	12.6	28	230		110	3.6	4.6	2.60
08	---	13.1	27	250		110	3.9	4.6	2.37
09	---	13.6	23	250	---	110	4.0		2.24
10	---	14.4	20	230		110	4.0		2.24
11	---	>13.8	22	250		110	4.0		2.24
12	---	>14.2	24	250		110	4.0		2.23
13	---	>14.1	21	240		115	3.6		<2.25
14	---	>14.3	20	250		120	---	3.7	<2.27
15	---	>14.4	17	260		120	---	3.8	<2.34
16	(285)	>14.3	12	280		---	---	3.9	<2.26
17	340	>14.3	9					2.3	<2.41
18	310	(14.0)	3						----
19	250	>14.8	2						----
20	240	>14.3	3					2.0	----
21	230	(12.8)	4					3.0	----
22	230	(11.6)	4					3.0	----
23	230	(10.2)	6					3.0	(2.77)

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 40

Leopoldville, Belgian Congo (4.4° S, 15.2° E) April 1960

Time	h'F2	foF2	Count	h'F 1	foF1	h'E	foE	fEs	(M3000)F2
00	220	13.0	12						2.77
01	225	8.7	10					1.3	<2.83
02	225	6.6	17					1.7	2.84
03	230	5.0	24					2.0	2.96
04	250	3.9	18					2.8	2.82
05	265	5.0	23	---		---	---	3.0	2.77
06	(250)	8.8	18	250		120	2.6	3.5	<2.89
07	---	11.0	20	240		120	3.2	3.9	2.73
08	275	12.2	23	230		115	3.6	4.0	2.62
09	(285)	12.7	23	230		110	4.0		2.50
10	(325)	13.6	20	250		110	---		<2.40
11	(350)	>14.4	17	250		110	---		2.42
12	---	>15.2	17	245		110	---		2.41
13	360	>15.2	20	250		115	---		2.38
14	355	15.5	17	250		115	3.6	4.5	2.38
15	(330)	15.4	14	250		115	---	4.8	2.42
16	---	(15.0)	9	260		120	---	3.8	(2.47)
17	270	>14.9	2	---				3.9	----
18	280	----	0					3.0	
19	265	----	0					2.0	
20	225	(17.0)	1						----
21	220	(13.6)	1						----
22	220	>15.2	8						(2.80)
23	225	14.0	11						2.76

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 41

Elisabethville, Belgian Congo (11.6° S, 27.5° E) April 1960

Time	h'F2	foF2	Count	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	240	5.6	22					1.7	2.83
01	240	4.7	25					2.0	2.84
02	250	3.5	23					2.4	2.84
03	255	3.2	25					2.8	2.98
04	270	4.0	26	---				2.2	2.78
05	245	8.5	18	250		125	2.4	3.0	3.04
06	(250)	10.1	17	240		115	3.0		2.94
07	(260)	10.6	22	235		110	3.5		2.85
08	270	11.5	20	230		110	3.7		2.74
09	(280)	12.0	17	240		110	3.9		2.61
10	310	13.0	16	235		110	4.0		2.58
11	320	13.0	21	245	---	110	---	4.0	2.56
12	320	13.1	21	255	---	110	3.9	4.8	2.54
13	315	13.2	23	250	---	110	3.5	4.0	2.55
14	(300)	13.0	20	250	---	115	3.2	4.0	2.56
15	---	13.0	22	250		120	2.7	3.6	2.60
16	250	13.0	17	---				3.3	<2.68
17	250	>12.5	6					3.0	<2.74
18	245	>11.5	6					2.5	<2.83
19	235	10.5	10					1.5	2.78
20	240	>9.0	13					2.0	<2.80
21	235	>8.8	14						2.85
22	235	7.8	14						2.84
23	240	6.0	16						2.82

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 42

Genoa (Monte Capellino), Italy (44.6° N, 9.0° E) January 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.4	26	280					
01		4.6	26	300					
02		4.4	27	310					
03		4.3	28	310					
04		4.3	27	300					
05		4.2	25	270					
06		3.9	27	255					
07		3.8	27	260					
08		7.1	29	240			1.6		
09		10.7	29	225			2.3		
10		12.6	30	230			2.8		
11		13.6	30	225			3.1		
12		13.1	30	225			3.2		
13		12.6	30	230			3.2		
14		12.6	30	230			3.1		
15		12.6	30	235			2.8	3.0	
16		11.8	30	230			2.4	2.8	
17		10.8	30	230			1.8	2.0	
18		9.6	30	225				2.4	
19		7.9	29	230				2.2	
20		5.9	30	235				2.0	
21		5.4	30	250				1.8	
22		4.9	29	270					
23		4.8	28	280					

Time: 15.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 5 minutes, automatic operation.

Table 43

Rome, Italy (41.8° N, 12.5° E) December 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.8	30	300					2.70
01		3.9	29	300					2.70
02		4.0	28	310					2.70
03		4.0	28	300					(2.80)
04		4.0	29	270					2.85
05		3.7	29	260					3.00
06		3.5	28	260					3.00
07		(4.4)	29	240					(2.90)
08		(7.4)	21	230		150	2.2		(3.30)
09		(9.3)	23	230		130	2.6		(3.35)
10		(11.2)	19	240		120	2.9		(3.25)
11		(11.8)	25	240		120	3.2		(3.20)
12		(11.5)	27	240		110	3.2		(3.15)
13		(11.0)	22	240		120	3.2		(3.10)
14		11.8	14	240		120	3.0		3.10
15		(11.2)	21	240		120	2.7		(3.15)
16		(10.0)	21	230		140	2.2		(3.20)
17		(8.8)	18	220					(3.25)
18		(6.7)	19	240				2.6	(3.25)
19		(5.4)	23	240				2.7	(3.20)
20		4.5	28	250				2.8	3.15
21		3.9	29	270					2.85
22		4.0	29	300					2.65
23		3.9	29	300					2.80

Time: 15.0°E.
Sweep: 1.4 Mc to 15.0 Mc in 5 minutes, automatic operation.

Table 44

Natal, Brazil (5.3° S, 35.1° W) December 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(9.2)	15	265					(2.80)
01		>9.0	20	260					(2.90)
02		>9.0	20	260					(2.90)
03		(8.7)	24	245					(3.00)
04		8.4	27	230					(3.08)
05		(7.1)	26	225					(3.10)
06		7.5	29	250		---	----		3.00
07		9.6	30	250		115	2.60	4.0	3.00
08		10.5	30	230		110	3.22	4.6	2.80
09		11.5	29	220		109	(3.65)	5.8	2.60
10		11.7	26	210		109	(3.95)	6.0	2.45
11		12.0	27	210		109	(4.00)	6.0	2.35
12		12.0	29	200		109	(4.12)	6.8	2.30
13		11.7	28	200		109	(4.10)	8.0	2.20
14		11.7	27	200		107	(4.00)	6.0	2.25
15		11.7	27	200		109	(3.75)	6.1	2.25
16		11.8	26	230		109	(3.45)	5.8	2.25
17		11.5	25	250		109	(3.00)	5.6	2.25
18		(11.5)	27	265		---	2.25	4.3	(2.25)
19		(9.6)	25	335					(2.20)
20		(8.7)	13	420					(2.20)
21		(9.3)	7	370					(2.45)
22		(10.3)	9	320					(2.65)
23		(10.2)	9	270					(2.82)

Time: 30.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 32.4 seconds.

Table 45

Pole Station (90.0° S) October 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	(6.35)	26	260	---	109	(2.45)	3.0	(2.78)
01	---	(6.6)	23	260	---	108	2.30	3.0	(2.70)
02	---	(6.2)	25	265	---	107	2.40	2.6	(2.60)
03	---	(6.3)	27	265	3.6	112	2.28		(2.52)
04	---	(6.55)	24	270	3.6	109	2.20		(2.50)
05	400	(6.5)	25	270	(3.6)	109	2.30		(2.50)
06	(475)	(5.3)	21	270	3.5	109	(2.28)	2.5	(2.40)
07	(500)	(5.2)	17	260	3.6	105	2.38		(2.40)
08	(510)	(4.8)	18	265	(3.4)	105	(2.40)		(2.50)
09	---	(4.8)	19	285	(3.8)	105	(2.42)	3.2	(2.50)
10	G	(4.8)	22	270	(3.5)	109	2.50	4.4	(2.65)
11	---	(5.6)	18	300	---	111	(2.60)	4.2	(2.75)
12	(700)	(5.2)	23	295	(3.4)	105	2.80	3.2	(2.75)
13	---	5.4	24	285	---	105	2.70		2.80
14	---	5.9	24	280	---	109	2.75		2.80
15	---	7.05	22	275	---	109	2.50		2.85
16	---	7.2	22	270	---	108	2.40		2.78
17	---	(6.4)	26	265	---	108	(2.30)		(2.70)
18	---	(6.3)	19	270	---	107	2.30		(2.80)
19	---	(5.8)	20	275	---	109	2.45		(2.72)
20		(5.6)	23	270	---	109	(2.45)		(2.90)
21		(5.75)	24	275		107	(2.50)		(2.80)
22		(6.0)	23	270		107	2.50	3.0	(2.85)
23	---	(6.45)	24	260	---	108	2.30	2.7	(2.85)

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 46

Pole Station (90.0° S) September 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.5)	23	270		105	----	2.7	(2.80)
01		(5.9)	25	290		113	----	2.4	(2.62)
02		(5.8)	24	300		111	(1.80)	2.0	(2.58)
03	---	(5.7)	29	295		110	(1.82)	2.0	(2.55)
04	---	(6.0)	22	310	---	111	----		(2.50)
05	---	(5.3)	21	315	---	108	(1.72)	1.8	(2.50)
06	---	(6.2)	17	300	---	109	----		(2.50)
07	---	(6.3)	19	320	---	108	----	2.3	(2.48)
08	---	(5.2)	21	315	---	111	(1.80)	2.0	(2.55)
09	---	(4.55)	20	(305)	---	111	----	2.4	(2.60)
10	---	(4.5)	18	(365)	---	107	2.20	2.9	(2.58)
11	---	(4.05)	18	335	---	107	----	3.0	(2.55)
12	---	(4.7)	14	(330)	---	---	----	3.0	(2.65)
13	---	(4.8)	15	(340)	---	106	----	2.9	(2.75)
14	---	(5.1)	23	310	---	107	2.55		(2.75)
15		(6.0)	21	290		109	(2.30)		(2.80)
16		(7.5)	20	300		111	(2.20)		(2.80)
17		(5.7)	18	320		113	(1.90)		(2.80)
18		(4.4)	19	(325)		113	1.90	2.2	(2.65)
19		(4.35)	20	300		110	1.85	2.2	(2.78)
20		4.8	17	265		111	2.15	2.5	2.85
21		(5.0)	22	270		112	1.85	2.6	2.80
22		(4.8)	22	270		114	----	2.8	(2.72)
23		(5.1)	26	270		109	(1.70)	2.1	(2.70)

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 47

Pole Station (90.0° S) August 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.2)	19	260				3.4	(2.68)
01		(5.0)	20	270				2.0	(2.70)
02		(5.45)	24	275				2.2	(2.60)
03		(6.25)	24	275					(2.52)
04		(6.4)	23	275					(2.55)
05		(6.6)	15	265					2.70
06		(5.9)	15	260					(2.50)
07		6.85	16	260					2.75
08		(6.0)	17	310		---	---	2.9	(2.55)
09		(5.2)	17	295		---	---	2.6	(2.50)
10		(5.2)	19	325		---	---	2.8	(2.48)
11		(4.75)	20	300		---	---	3.0	(2.55)
12		(4.7)	14	300		---	---	2.5	(2.60)
13		4.6	17	(315)		---	---	2.3	2.72
14		(4.8)	15	285		---	---	2.8	(2.80)
15		(5.3)	19	300		---	---	2.0	2.65
16		6.25	20	285		---	---	2.0	2.85
17		(5.05)	16	290		---	---	2.0	(2.85)
18		(4.2)	9	320		---	---	2.0	(2.65)
19		(3.4)	10	310		---	---	2.6	(2.65)
20		(3.4)	7	300		---	---	2.5	(2.65)
21		(4.3)	18	275		---	---	2.5	(2.78)
22		(4.05)	18	270		---	---	2.1	(2.70)
23		(4.5)	25	270		---	---	2.0	(2.70)

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 48

Pole Station (90.0° S) July 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.3)	13	260				2.2	(2.75)
01		(4.5)	16	245				2.0	(2.82)
02		(4.95)	14	(270)					(2.65)
03		(4.9)	11	275				1.8	(2.65)
04		(5.5)	16	260					(2.70)
05		(5.05)	10	(280)					(2.65)
06		(5.2)	17	285					(2.68)
07		(5.05)	14	(285)				2.1	(2.55)
08		(4.5)	16	305					(2.65)
09		(4.5)	15	325					(2.65)
10		(4.3)	12	300				2.8	(2.65)
11		(4.65)	8	290				2.8	(2.70)
12		(4.4)	6	<285		---	---	5.2	(2.75)
13		(5.25)	6	(290)		---	---	2.9	(2.90)
14		(5.4)	7	(290)		---	---		(2.85)
15		(5.7)	13	310		---	---		(2.60)
16		4.4	11	(300)				2.8	2.80
17		(4.6)	6	280				2.3	----
18		(8.1)	3	(235)				2.6	----
19		(4.15)	4	235		---	---	2.5	----
20		(4.9)	5	(255)		---	---	2.0	----
21		(4.5)	7	(235)				2.6	(2.90)
22		(4.5)	8	250				2.4	(2.95)
23		(4.5)	9	300		---	---	2.0	(2.75)

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 49

Svalbard, Norway (78.2° N, 15.7° E) May 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	5.9	16	270	----	110	2.40	2.8	2.55
01	---	4.9	17	260	----	115	2.35	2.6	2.55
02	(485)	5.0	18	255	3.70	110	2.45	2.6	2.40
03	(510)	5.0	19	240	3.60	110	2.60	2.6	2.55
04	620	5.1	18	250	3.90	110	2.70	3.0	2.30
05	G	4.8	17	250	4.10	110	2.80	3.1	2.30
06	G	5.6	17	250	4.20	110	2.90	3.1	2.25
07	550	5.8	18	250	4.45	110	3.10	3.2	2.30
08	560	6.1	19	255	4.60	105	3.20		2.30
09	490	7.0	20	245	4.70	110	3.25		2.40
10	500	7.0	21	240	4.60	110	3.20		2.55
11	(490)	6.9	17	240	4.60	110	3.20		2.45
12	(635)	6.7	17	240	4.60	110	3.20		2.55
13	(550)	6.9	15	235	4.80	110	3.30		2.55
14	480	6.6	18	240	4.70	110	3.20		2.55
15	(470)	6.7	18	240	4.60	110	3.20		2.55
16	(440)	6.9	16	250	4.60	110	3.05		2.55
17	---	6.7	20	250	----	110	2.95	3.2	2.55
18	---	6.7	18	250	----	110	2.85	3.3	2.55
19	---	6.5	21	250	----	110	2.70	4.4	2.55
20	---	6.6	19	255	----	110	2.60	3.2	2.55
21	---	6.3	19	260	----	110	2.50	2.8	2.55
22	---	6.2	18	260	----	110	2.40		2.55
23	---	6.1	13	260	----	105	2.35		(2.60)

Time: 15.0°E.
Sweep: 0.68 Mc to 24.6 Mc in 5 minutes, automatic operation.

Table 50

Juliusruh/Rügen, Germany (54.6° N, 13.4° E) May 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.2	29	320					2.35
01		6.7	28	320			E		2.35
02		6.4	27	315			E	1.0	2.35
03		6.0	27	320			E	1.2	2.40
04		6.0	28	320	---		1.45	1.6	2.50
05	---	6.4	30	<300	---		2.20	2.4	2.60
06	---	7.1	29	270	---		2.75	2.8	2.70
07	(400)	7.6	29	250	4.8		3.10	3.5	2.65
08	500	8.2	29	250	4.9		3.45	3.8	2.60
09	450	8.5	29	235	5.4		3.60	4.0	2.60
10	460	8.9	30	240	5.5		3.75	4.2	2.55
11	430	8.8	30	230	5.6		3.90	4.2	2.50
12	430	8.8	30	240	5.7		3.90	4.2	2.55
13	415	8.6	30	240	5.6		3.90	4.3	2.55
14	415	8.7	29	240	5.5		3.75	4.0	2.55
15	405	8.8	30	245	5.5		3.60	3.9	2.60
16	(440)	8.6	29	250	---		3.50		2.65
17	---	8.7	30	260	---		3.20	3.5	2.65
18		8.6	30	270			2.80	3.3	2.70
19		8.9	29	285			2.25	2.6	2.75
20		8.5	30	285			1.80	2.1	2.75
21		8.2	29	285					2.65
22		7.9	29	290					2.55
23		7.3	29	300					2.45

Time: 15.0°E.
Sweep: 0.5 Mc to 20.0 Mc in 20 seconds.

Table 51

Capetown, Union of S. Africa (34.1° S, 18.3° E) May 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.2	31	---				<1.7	2.70
01		3.1	31	---				2.0	2.70
02		3.2	31	---				<1.6	2.65
03		3.3	31	---				<1.4	2.70
04		3.4	31	---				1.3	2.75
05		3.2	31	(255)				<1.3	2.85
06		3.2	31	---				<1.3	2.90
07		3.7	31	235			<1.2	<1.2	2.75
08		7.9	31	230			2.2		3.25
09	---	10.4	31	230			2.9		3.15
10	(235)	12.0	31	230			3.3		3.05
11	---	13.2	30	230			3.6		2.95
12	(250)	13.5	30	230	---		3.8		2.90
13	---	13.7	30	230	---		3.8		2.80
14	---	14.0	31	240	---		3.7	3.8	2.80
15	(255)	13.9	31	240	---		3.5		2.75
16	---	13.8	31	240			3.1	3.5	2.80
17		13.4	31	235			2.4	2.8	2.85
18		12.4	31	225			1.7	2.1	2.90
19		10.7	31	220				2.1	2.90
20		8.9	31	230				<1.8	3.05
21		7.1	31	225				1.5	3.20
22		4.6	31	(220)				<1.5	3.05
23		3.5	31	---				<1.5	2.90

Time: 30.0°E.
Sweep: 1.0 Mc to 17.0 Mc in 7 seconds.

Table 52

Canberra, Australia (35.3° S, 149.0° E) May 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.1	28	<250					2.90
01		6.0	27	250					2.90
02		6.0	26	245					3.00
03		5.8	28	245					3.00
04		5.7	29	235					3.10
05		5.1	29	205					3.05
06		4.6	29	210			<1.60		3.10
07		7.3	29	205			1.90		3.40
08		10.2	29	200			2.60		3.45
09		>11.8	29	200			3.10	3.4	(3.40)
10		(12.2)	29	200			3.40	3.6	3.30
11		>12.8	28	200			3.60	3.7	(3.25)
12		12.3	29	200			3.60		3.20
13		(12.1)	27	200			3.55		(3.15)
14		>12.1	26	205			3.45		----
15		>12.1	28	205			3.20		3.20
16		12.0	29	205			2.75		3.15
17		11.8	29	205			1.95	2.2	3.15
18		10.3	29	200			<1.60	2.0	3.10
19		8.9	29	200					3.15
20		7.6	29	205					3.05
21		7.0	29	<220					3.05
22		6.6	28	235					2.90
23		6.1	28	<245					2.90

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 53

Trelew, Argentina (43.2° S, 65.3° W) May 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.3	17	300					2.45
01		5.6	17	290					2.60
02		5.5	21	270					2.70
03		5.2	20	275					2.65
04		5.2	21	280					2.65
05		5.0	19	235					2.80
06		4.4	17	230					2.60
07		6.0	12	230		--	1.75		2.80
08		8.6	16	200		99	2.80	3.5	3.35
09		>9.9	14	200		75	3.40	4.0	(3.45)
10		>10.0	11	200		73	3.75	(4.0)	----
11		>10.2	12	200		71	3.80	4.0	----
12	---	>10.0	12	200		79	----	4.1	----
13	---	>10.2	12	200		77	3.80		
14	---	>10.9	10	200		79	3.70		----
15	---	>10.0	10	200		81	3.50		----
16		>10.1	16	200		89	3.00		(3.40)
17		9.8	15	190		--	2.35		(3.40)
18		(8.2)	8	(200)					(3.00)
19		>7.5	6	(205)					----
20		>7.1	10	210				2.4	(3.00)
21		6.3	13	210					2.85
22		>5.8	15	250					2.65
23		5.6	16	290					2.50

Time: 60.0°W.
Sweep: 1.3 Mc to 18.0 Mc in 15 seconds.

Table 54

Oourbes, Belgium (50.1° N, 4.6° E) April 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.7	24	315				<1.3	2.50
01		6.4	24	310					2.50
02		6.2	23	310					2.50
03		5.7	23	305					2.50
04		5.4	25	295		---	----	<1.3	2.60
05		5.8	25	270		<132	<1.60	<1.6	2.80
06	---	6.5	25	250	----	115	2.40		2.95
07	---	7.6	25	240	----	109	2.95		2.90
08	---	8.4	24	230	----	109	3.30		2.85
09	---	10.0	21	220	----	109	3.50		2.80
10	(420)	9.9	22	225	5.45	109	3.65		2.80
11	(445)	10.3	21	225	5.65	109	3.75	4.0	2.75
12	(350)	10.4	22	230	5.50	109	(3.80)	4.0	2.70
13	(355)	10.6	22	230	5.70	109	(3.70)		2.75
14	(340)	10.4	19	235	5.50	<110	3.65		2.75
15	---	10.3	22	240	----	111	3.40		2.75
16	---	10.0	21	240	----	111	3.05		2.80
17		9.8	23	250		114	2.65		2.85
18		9.7	24	255		<121	2.00		2.90
19		9.2	25	250		---	<1.60	<1.6	2.80
20		8.5	25	250				<1.6	2.70
21		(7.7)	25	270				<1.6	(2.60)
22		7.5	25	290				<1.6	2.55
23		7.2	24	310				<1.6	2.50

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 55

Pruhonice, Czechoslovakia (50.0° N, 14.6° E) April 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.4	27	315					
01		6.2	27	305					
02		5.9	27	300					
03		5.4	26	305					
04	---	5.6	26	285	---	---	---		
05	---	6.4	27	255	---	115	2.4		
06	---	7.0	25	245	---	105	2.8		
07	---	8.2	26	235	---	100	3.2		
08	400	9.1	24	230	5.5	100	3.5		
09	320	9.8	21	230	5.7	105	3.8		
10	340	10.6	23	225	5.9	110	3.9		
11	(350)	10.9	22	225	6.1	110	3.9		
12	360	10.9	25	230	6.4	110	3.9		
13	(350)	10.8	24	230	6.0	110	3.9		
14	(325)	10.4	26	235	5.9	105	3.6		
15	(370)	10.2	27	240	5.8	105	3.2		
16	---	10.0	25	245	---	105	2.9		
17		10.0	26	250		115	2.4		
18		9.6	25	250		---	---		
19		9.0	27	250					
20		8.0	26	(255)					
21		7.3	27	(280)					
22		6.9	25	300					
23		6.6	27	(320)					

Time: 0.0°.

Table 56

Trelew, Argentina (43.2° S, 65.3° W) April 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.1	21	305					2.50
01		7.2	20	295					2.60
02		7.2	20	285					2.60
03		7.1	19	290					2.60
04		7.0	20	280					2.40
05		6.3	22	240		---	----		2.60
06		6.0	19	310		---	----		2.50
07		8.4	21	235		149	2.25		2.85
08		>9.7	19	220		99	3.05		----
09		>9.6	20	220		97	3.50	3.9	----
10		>9.9	14	220		96	----	4.4	
11	---	>10.0	11	220		95	----	5.0	
12	---	>10.0	14	210		95	----	4.4	----
13	---	>10.4	16	230	---	97	----	4.2	----
14		>10.0	18	220		96	3.90		----
15		>10.0	19	230		97	3.80		
16		>10.0	16	245		97	3.40		
17		>9.8	14	240		---	2.65	3.6	----
18		>9.5	10	230		---	----	3.5	----
19		>8.8	10	230				(2.5)	----
20		(8.4)	12	250				3.0	(2.70)
21		8.0	15	265					2.60
22		8.0	18	260					2.70
23		7.4	20	290					2.60

Time: 60.0°W.
Sweep: 1.3 Mc to 18.0 Mc in 30 seconds.

Table 57

Eureka, Canada (80.0° N, 85.9° W) November 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.0	30	260					
01		6.2	30	260					
02		6.0	30	260					
03		6.0	28	260					
04		5.4	28	260					
05		6.0	28	260					
06		6.0	29	260					
07		5.9	28	260					
08		5.9	28	260					
09		6.5	28	250					
10		6.1	29	260					
11		8.2	27	240					
12		8.2	29	240					
13		8.4	26	240					
14		8.2	26	260					
15		8.0	28	250					
16		8.0	29	250					
17		7.2	29	260					
18		7.3	29	260					
19		7.0	29	260					
20		7.0	29	250					
21		6.6	29	260					
22		6.4	30	260					
23		6.3	29	260					

Time: 75.0°W.
Sweep: 1.8 Mc to 20.0 Mc in 15 seconds.

Table 58

Svalbard, Norway (78.2° N, 15.7° E) August 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	(6.1)	7	(265)		110	2.30	3.2	(2.40)
01	---	(5.5)	7	265		---	2.25	3.1	----
02	---	(5.3)	5	(250)		---	2.35	3.2	----
03	---	(5.2)	6	(250)	3.60	---	----	3.2	----
04	---	(5.2)	5	(260)	4.00	---	----	3.2	----
05	(615)	(5.0)	6	(250)	4.10	---	3.15	3.2	----
06	(540)	(5.5)	8	(245)	4.20	---	2.95	3.2	(2.30)
07	(640)	(5.6)	9	(250)	4.40	100	3.20	3.2	(2.20)
08	(540)	5.9	11	(250)	4.65	---	3.25	4.2	(2.30)
09	---	(6.5)	9	245	4.80	100	3.25		(2.50)
10	---	(6.4)	8	240	----	---	3.20	4.1	(2.50)
11	(475)	6.6	10	(220)	4.95	100	3.20		(2.40)
12	(550)	(6.4)	8	(220)	4.70	---	3.20	4.0	(2.50)
13	---	(6.2)	7	(220)	----	---	3.20	3.2	----
14	---	(6.4)	7	(250)	----	---	3.25	4.1	----
15	---	(6.2)	6	(245)	----	---	3.15	6.7	----
16	---	6.2	10	(245)	----	100	3.15	3.3	(2.55)
17		6.0	10	(250)	----	100	3.05	4.0	(2.60)
18		(6.0)	5	---	----	---	----	6.0	----
19		(5.8)	8	---	----	---	----	4.8	----
20		(6.0)	8	(260)		---	----	6.0	(2.60)
21		(5.9)	6	(260)		---	----	7.1	----
22		5.8	10	(265)		115	2.30	3.2	(2.55)
23		5.8	10	(275)		---	----	3.2	(2.55)

Time: 15.0°E.
Sweep: 0.68 Mc to 24.6 Mc in 5 minutes, automatic operation.

Table 59

Meanook, Canada (54.6° N, 113.3° W) August 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		4.8	23	320					
01		4.7	24	320				3.7	
02		4.8	24	350				4.0	
03		4.5	23	360				4.2	
04		4.5	22	340				3.1	
05		4.6	25	310		---	E	3.7	
06	(500)	5.2	26	270	3.7	110	2.2	2.9	
07	460	5.8	27	240	4.2	110	2.8		
08	460	6.1	28	220	4.8	105	3.1		
09	500	6.4	28	210	5.0	100	3.4		
10	480	6.5	28	210	5.1	100	3.7		
11	500	6.8	28	210	5.3	100	3.8		
12	500	7.0	27	210	5.4	100	3.9		
13	500	7.1	26	210	5.5	100	3.9		
14	460	7.2	26	210	5.5	100	3.9		
15	460	7.2	28	210	5.4	100	3.7		
16	440	7.1	27	220	5.2	100	3.5		
17	400	7.2	26	220	5.0	105	3.2		
18	---	7.1	27	240	---	105	2.9		
19	---	7.0	28	260	---	110	2.3		
20		6.8	28	270		---	2.0		
21		6.5	26	260		---	---		
22		5.9	27	270		---	---		
23		5.2	25	300		---	---		

Time: 105.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 60

Hollandia, Netherlands New Guinea (2.5° S, 140.8° E) April 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		>13.9	28	230		100	4.0		2.90
01	(400)	>13.6	29	240	(9.5)	100	---		----
02	(430)	>13.5	30	(250)	---	100	---		----
03	450	>13.4	30	(250)	(8.8)	---	---		----
04	485	>13.4	29	(250)	(8.2)	100	---		----
05	485	>13.4	27	<260	(8.0)	100	(4.2)		----
06	440	>13.5	28	<270	---	100	3.9		----
07	---	>13.6	29	240		100	3.2	3.5	----
08		>13.7	30	250		120	2.4	3.2	----
09		>13.6	30	300		---	---	3.7	----
10		>13.7	30	330				3.4	----
11		>13.9	30	290				3.4	----
12		>13.6	30	220				3.5	----
13		>13.7	30	210				3.2	----
14		>13.9	30	210				3.1	(3.00)
15		>13.7	30	200					3.05
16		11.4	30	200					2.95
17		10.4	28	210				2.4	2.90
18		10.0	29	220				3.1	2.95
19		10.0	28	210				2.8	3.10
20		8.9	29	205		---	---	2.8	3.35
21		11.8	28	240		130	2.3	3.3	3.25
22		>14.0	29	220		100	3.2	3.8	3.25
23		(14.3)	29	220		100	3.8		3.15

Time: 0.0°.
Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 61

Casablanca, Morocco (33.6° N, 7.6° W) January 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(7.9)	18	<265					2.75
01		(7.3)	19	<260					(2.60)
02		7.1	18	<260					2.70
03		6.4	19	<250					3.05
04		6.0	19	<245					2.90
05		>4.6	20	<265					2.70
06		4.6	19	<300					2.65
07		5.1	19	260					2.85
08		9.0	20	240		(135)	2.00		3.20
09		11.6	18	230		110	2.90		3.10
10	---	13.4	18	230		110	3.40	3.6	2.90
11	---	13.3	18	230		110	3.70	3.7	2.75
12	---	13.0	18	230	---	105	3.90		2.65
13	(385)	12.9	17	225	---	105	3.85		2.50
14	(355)	12.4	19	220	6.9	105	3.70		2.50
15	---	12.8	18	240	---	110	3.50		2.50
16	---	12.0	19	245	---	110	3.20		2.55
17		11.5	15	250		120	2.45	2.4	2.60
18		11.4	13	255		---	----	2.6	(2.70)
19		8.7	14	<255				2.2	(2.60)
20		>8.7	16	<260					2.50
21		(8.8)	19	<270					(2.50)
22		8.6	19	<270					2.65
23		8.5	19	<275					2.65

Time: 0.0°.
Sweep: 1.6 Mc to 16.0 Mc in 1 minute 15 seconds.

Table 62

Lulea, Sweden (65.6° N, 22.1° E) April 1957

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.6	10	350				3.5	----
01		>5.0	8	345				3.4	----
02		>4.0	15	330					
03		>5.0	17	330		---	---		----
04		(5.2)	17	290		130	2.0		----
05		(5.8)	18	260		130	2.4		(3.0)
06	---	6.3	22	250	---	115	2.7		3.0
07	---	6.9	18	250	---	110	3.0		2.95
08	(410)	7.5	23	250	5.0	105	3.4		2.7
09	(410)	7.8	25	240	5.3	105	3.5		2.85
10	(480)	7.9	22	240	5.5	100	3.5		(2.65)
11	450	>8.0	25	230	5.5	100	3.6		(2.65)
12	(450)	>8.0	27	230	5.5	100	3.6		(2.6)
13	---	>0.0	28	240	5.4	100	3.5		2.75
14	(450)	>8.0	26	235	5.4	105	3.5		2.7
15	---	>8.0	25	240	---	105	3.4		(2.8)
16	---	>8.0	27	245	---	105	3.1		(2.8)
17	---	7.8	26	250	---	115	2.9		----
18		>7.0	22	250		130	2.6		
19		(7.0)	17	265		150	2.0		----
20		>7.0	11	270		---	---	2.6	
21		>5.0	11	295				2.6	
22		>5.0	7	330				3.0	
23		>4.3	9	340				2.8	----

Time: 15.0°E.
Sweep: 1.4 Mc to 10.0 Mc in 9 minutes, automatic operation.

Table 63

Lwiro, Belgian Congo (2.3° S, 28.8° E) April 1957

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>13.4	29	225				(1.9)	----
01		>13.1	28	210				(1.7)	(3.17)
02		>10.0	26	220				1.3	(2.95)
03		>10.0	27	230					3.02
04		>10.0	28	220				(1.7)	3.20
05		7.8	26	210				(1.9)	3.32
06		7.1	27	240		---	E	(2.0)	3.09
07	240	10.9	29	235		121	2.70	3.2	3.10
08	(245)	12.5	29	230		115	3.35	3.7	3.00
09	---	>13.4	28	225		111	3.80	4.1	2.70
10	---	>13.4	30	215	---	---	4.00		(2.60)
11	---	>13.5	20	210	---	---	4.20		<2.70
12	388	>13.8	29	200	---	---	4.30		
13	395	>13.6	28	205	---	---	4.20	4.5	----
14	402	>13.4	29	210	---	---	4.00	4.2	----
15	400	>13.4	29	225	---	---	3.75	4.2	----
16	395	>13.6	29	235	---	113	3.40	3.7	----
17	---	>13.5	29	250	---	117	2.70	(3.4)	----
18		>13.4	28	280	---			(2.8)	----
19		>12.6	29	325				(2.2)	----
20		>10.0	28	315				(1.9)	
21		>10.0	29	250				(2.0)	
22		>10.0	29	225				(1.7)	
23		>13.3	29	220				(1.8)	----

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 64

Port Lockroy (64.8° S, 63.5° W) April 1957

Time	h'F2	foF2	Count	h'F1	foF1	h'E	foE	foEs	(M3000)F2
00		4.3	22					1.1	---
01		4.3	18					1.4	(2.2)
02		4.0	18					<1.2	(2.1)
03		3.6	16					1.2	---
04		3.5	19					1.2	(2.2)
05		3.4	18					1.3	2.0
06		(3.6)	17					1.2	(2.0)
07		(5.0)	18					1.2	---
08		7.0	25						2.9
09		10.0	20					2.5	3.2
10		12.0	25					2.6	3.2
11		13.0	26						3.2
12		13.8	22						3.2
13		12.9	23						3.1
14		12.6	26						3.2
15		11.2	28						3.2
16		11.2	27						(3.2)
17		(10.5)	27					1.4	---
18		>9.0	10					1.4	(3.2)
19		(7.0)	22					1.3	(3.0)
20		5.7	21					1.4	(2.9)
21		4.9	23					1.2	(2.4)
22		4.8	22					1.0	(1.9)
23		4.5	25						(2.2)

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 65

Lwiro, Belgian Congo (2.3° S, 28.8° E) March 1957

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>10.0	28	210					(3.01)
01		>10.0	28	225					2.88
02		>10.0	26	245					2.92
03		>10.0	25	235					3.12
04		>10.0	25	215				(1.5)	3.26
05		7.0	26	210				(1.6)	3.35
06		6.3	26	230		---	E	(1.9)	3.05
07	235	>10.0	26	230		119	2.60	3.0	3.28
08	240	(10.6)	27	220		111	3.30	3.5	3.08
09	---	>10.0	29	210		111	3.70	3.9	2.72
10	---	>12.8	27	210	---	109	4.00		(2.60)
11	---	>10.0	27	205	---	---	4.20		(2.50)
12	(405)	>12.6	27	200	(5.3)	---	4.30		----
13	415	>13.2	28	200	(5.3)	---	4.20		(2.50)
14	415	>12.8	27	210	(5.0)	---	4.00		----
15	415	>13.4	28	215	---	---	3.80		----
16	420	>13.2	28	225	---	111	3.50		----
17	(405)	>13.2	30	240	---	113	3.00		----
18		>11.2	30	280		---	1.90		----
19		>10.0	28	345				(1.8)	----
20		>10.0	27	310				(1.5)	
21		>10.0	28	240				(1.6)	
22		>10.0	28	220					
23		>10.0	26	205					----

Time: Local.
Sweep: 1.25 Mc to 25.0 Mc in 10 minutes, automatic operation.

Table 66

Kerguelen I. (49.4° S, 70.3° E) March 1957

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.0	20	300		---	----	1.5	2.50
01		2.9	17	320		---	----	1.3	2.60
02		3.0	10	345		---	----	1.5	2.50
03		3.4	10	345		---	----	1.4	(2.50)
04		3.1	11	340		---	----		(2.45)
05		2.8	11	350		---	----		(2.50)
06		4.2	19	310	---	105	1.75		2.70
07	---	5.6	26	250	---	100	2.30		2.95
08	---	6.5	27	245	4.2	100	2.85		3.00
09	675	7.0	28	225	4.5	100	3.25		2.75
10	490	7.9	30	225	4.8	100	3.50		2.55
11	475	>9.0	28	220	5.2	100	3.50		2.55
12	460	10.0	30	215	5.2	100	3.60		2.50
13	555	10.2	30	230	5.1	100	3.60		2.50
14	480	10.4	29	225	5.2	100	3.50		2.55
15	460	10.2	29	230	5.0	100	3.40		2.60
16	---	10.0	31	230	---	100	3.10		2.70
17	---	>9.2	27	240	---	100	2.75		2.80
18		8.3	23	245		100	2.10		3.00
19		7.0	21	240		---	1.30		2.90
20		6.5	25	240		---	----	1.1	2.90
21		4.6	24	245		---	E		2.90
22		3.4	22	260		145	1.25		2.75
23		3.1	19	300		150	1.10		2.70

Time: Local.
Sweep: 0.88 Mc to 14.14 Mc in 10 minutes, automatic operation.

Table 67

Terre Adelie (66.7° S, 140.0° E) March 1957

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	(4.5)	8	290	---	---	----	2.8	(2.50)
01	---	(3.5)	13	280		---	----	2.6	(2.40)
02	---	(4.1)	8	300		---	----	2.2	(2.30)
03	---	(3.3)	15	310	---	---	E	2.0	(2.35)
04	---	(4.0)	10	320	---	---	1.40	2.2	(2.60)
05	---	4.4	10	300	---	---	1.70	2.6	(2.60)
06	---	(4.6)	14	270	---	110	(2.10)		(2.70)
07	350	5.3	15	260	3.7	110	2.45		2.65
08	365	6.0	15	250	4.2	110	2.80		2.40
09	400	6.0	10	250	4.4	105	2.95		(2.50)
10	400	7.1	12	250	4.5	105	(3.05)		(2.10)
11	370	0.0	12	245	4.6	105	3.15		(2.50)
12	350	8.0	13	235	4.6	105	3.05		(2.60)
13	395	(7.6)	17	240	4.7	105	3.10		(2.50)
14	410	7.1	13	245	4.6	105	3.00		2.40
15	400	(7.6)	16	240	4.4	105	2.80		(2.50)
16	350	8.1	19	255	---	110	2.50		2.50
17	---	8.0	15	260	---	110	(2.25)	2.3	2.55
18		7.4	17	265		120	1.80	2.4	2.60
19		7.5	18	260		---	1.50	2.8	(2.60)
20	---	(6.6)	8	260		---	E	3.1	(2.45)
21		5.8	12	280		---	----	2.2	(2.45)
22		(6.0)	10	265		---	----	2.4	(2.50)
23	---	(4.5)	5	270		---	----	2.2	----

Time: 135.0°E.
Sweep: 1.2 Mc to 17.0 Mc in 1 minute.

Table 68

Lwiro, Belgian Congo (2.3° S, 28.8° E) February 1957

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>10.0	26	225					2.86
01		9.6	24	240					2.88
02		0.8	24	240					2.85
03		7.8	24	240				(1.6)	3.08
04		6.5	25	230				(1.6)	3.08
05		5.6	24	230				(1.6)	3.18
06		5.9	25	240		---	E	(1.7)	2.96
07	(245)	9.2	24	235		119	2.50	2.8	3.17
08	250	>10.0	25	220		113	3.25	3.5	3.05
09	---	(10.2)	28	215		111	3.65	3.0	2.74
10	(200)	>10.0	26	210	---	109	4.00	4.2	2.65
11	---	>10.0	26	205	(5.2)	---	4.15	4.2	<2.50
12	---	>11.0	26	200	---	---	4.20	4.4	---
13	405	(12.4)	25	200	---	---	4.15		(2.47)
14	395	>12.5	27	205	---	---	4.00		(2.49)
15	390	>12.1	28	215	---	111	3.80		----
16	380	>10.9	28	230	---	111	3.50		(2.62)
17	(360)	>12.4	27	240	---	112	2.95		(2.57)
18		>10.0	22	270		121	2.10	(2.6)	----
19		>10.0	24	330				(1.8)	----
20		>10.0	26	300				(1.9)	----
21		>10.0	26	240				(1.6)	----
22		>10.0	27	220				1.6	(3.08)
23		>10.0	25	210					(2.88)

Time: Local.
Sweep: 1.25 Mc to 25.0 Mc in 10 minutes, automatic operation.

Table 69

Lwiro, Belgian Congo (2.3° S, 28.8° E) May 1954

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		3.9	17	250				2.1	3.03
01		3.6	11	240				1.8	3.19
02		(3.1)	16	235				2.9	3.33
03		(2.0)	11	258				2.4	(2.92)
04		2.1	19	270				2.4	3.12
05		1.6	13	275				1.8	(3.40)
06		3.4	25	250				2.2	3.18
07	265	5.8	24	235	----	119	2.15	3.0	3.43
08	290	6.5	25	(225)	3.95	111	2.65	4.3	3.28
09	295	7.0	25	(230)	4.15	111	3.00	4.1	3.28
10	320	7.5	27	(215)	4.35	109	3.20	4.6	3.14
11	320	8.0	25	(210)	4.35	108	3.30	4.8	3.00
12	315	9.4	29	(210)	4.40	110	3.35	4.9	2.97
13	315	(9.4)	28	(210)	4.35	107	3.30	4.3	3.00
14	310	9.5	30	(205)	4.30	107	3.15	4.4	2.96
15	300	9.2	28	(220)	4.15	106	2.95	3.7	3.06
16	280	8.6	28	---	3.90	110	2.70	4.1	3.10
17	(255)	7.9	27	(245)		117	2.15	3.8	3.13
18		7.7	27	240				3.3	3.26
19		7.6	25	230				2.6	3.38
20		5.6	26	220				2.6	3.50
21		3.9	23	215				2.0	3.54
22		3.1	20	235				1.8	3.06
23		3.4	18	270				2.0	3.00

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 70

Lwiro, Belgian Congo (2.3° S, 28.8° E) April 1954

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.4	21	240				1.6	3.04
01		5.3	20	220					3.28
02		4.5	19	230				2.0	3.06
03		3.2	24	250				2.0	3.07
04		2.8	24	245				2.0	3.27
05		2.2	20	240				2.0	3.50
06		3.5	27	240				2.4	3.44
07	250	6.1	26	240	----	124	2.10	2.9	3.61
08	270	6.8	26	230	4.10	118	2.70	3.5	3.42
09	300	7.7	29	230	4.40	114	3.00	3.5	3.11
10	310	8.8	29	215	4.45	114	3.30		2.95
11	350	>9.7	28	210	4.60	111	3.40		2.88
12	350	>10.0	29	205	4.50	111	3.40		2.89
13	325	>10.0	29	(210)	4.50	111	3.40		2.98
14	330	>10.0	28	(195)	4.40	111	3.30		2.92
15	330	>10.0	27	(200)	4.30	115	3.05	3.5	2.86
16	320	>10.0	25	(230)	(4.15)	116	2.65	3.7	2.90
17	290	>11.0	25	250	----	123	2.25	3.1	3.08
18		>10.0	27	250				2.4	(3.21)
19		>10.0	28	230				2.2	3.42
20		9.2	28	210				2.0	<3.57
21		6.4	28	210					3.37
22		4.7	24	220					3.00
23		4.8	22	235					2.90

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 71

Lwiro, Belgian Congo (2.3° S, 28.8° E) March 1954

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.2	20	220					3.34
01		4.8	21	230					3.10
02		4.2	18	250					3.04
03		3.4	18	260					3.06
04		3.0	17	250				1.6	3.23
05		(2.6)	19	245				1.9	(3.38)
06		3.1	25	250		---	E	2.2	(3.28)
07	270	5.9	29	250		119	(2.05)	2.9	3.44
08	300	6.9	27	240	(4.10)	115	2.65	2.8	3.19
09	330	7.4	30	230	(4.30)	114	3.05		2.92
10	360	8.6	30	220	4.50	115	3.30		2.80
11	385	>10.0	30	220	4.50	116	3.45		2.77
12	380	>10.0	30	220	4.50	114	3.50		2.74
13	360	>10.0	30	210	4.45	116	3.45		2.80
14	370	>10.0	30	220	4.45	114	(3.40)		2.79
15	335	>10.0	29	215	(4.30)	114	3.15		(2.94)
16	315	>10.0	29	230	(4.20)	114	2.85		(2.98)
17	305	>10.0	30	250	----	120	2.35	(2.9)	2.86
18	---	>9.6	30	265		---	1.65	2.3	2.88
19		>9.6	30	270				2.0	2.94
20		>9.1	28	250				1.6	<3.10
21		8.5	27	245					3.10
22		8.0	27	240					3.20
23		7.8	23	230					3.23

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 72

Lwiro, Belgian Congo (2.3° S, 28.8° E) February 1954

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.0	26	215					3.54
01		3.4	26	255					2.80
02		3.1	26	280					2.86
03		3.0	24	270				1.4	3.02
04		2.7	25	275				1.4	3.08
05		2.4	24	275				1.4	3.14
06		2.9	25	<275		---	E	1.5	3.11
07	285	5.4	26	260	----	129	1.90	2.5	3.27
08	315	6.6	26	245	4.05	121	2.55	3.0	3.13
09	350	7.2	24	230	4.30	121	3.00	3.0	2.88
10	370	7.9	24	230	4.40	122	3.20		2.73
11	400	8.5	24	220	4.40	119	3.40		2.71
12	380	9.6	25	225	4.40	121	3.40		2.72
13	400	9.7	25	230	4.40	123	3.40		2.66
14	395	9.8	24	225	4.35	121	3.30		2.66
15	380	9.9	25	225	4.25	121	3.10		2.71
16	360	9.6	26	240	4.15	123	2.80	2.8	2.72
17	335	9.5	27	250	4.00	125	2.35	2.6	2.74
18	305	8.8	26	270		---	1.60	2.0	2.73
19		8.5	27	290				2.0	2.75
20		7.8	26	290				1.6	2.81
21		7.6	26	285				1.6	2.86
22		8.2	26	260					3.10
23		8.3	25	230					3.40

Time: Local.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

USCOMM-NBS-BL

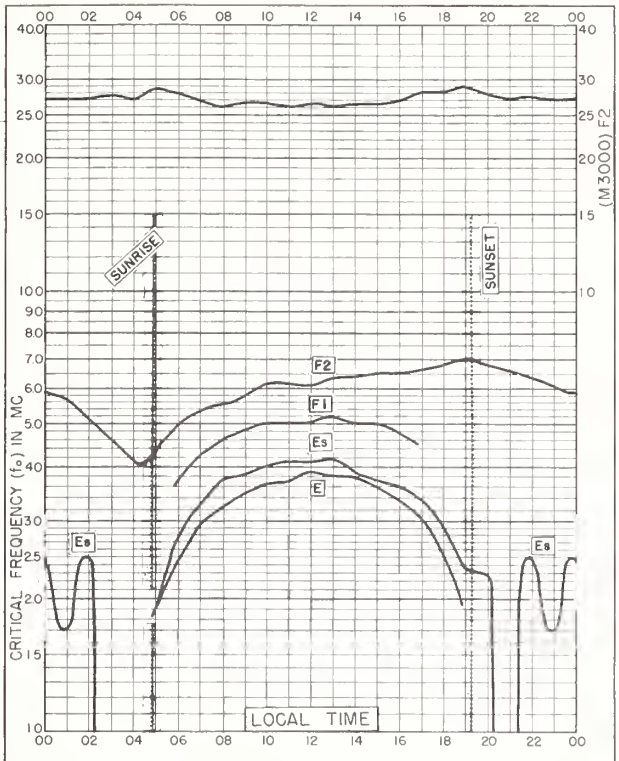


Fig. 1. WASHINGTON, D. C.
38.7°N, 77.1°W JULY 1960

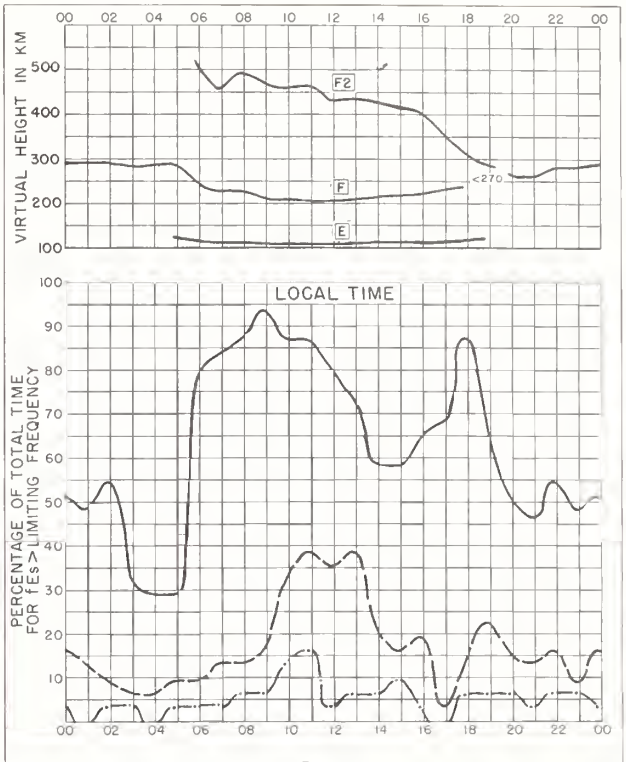


Fig. 2. WASHINGTON, D. C. JULY 1960

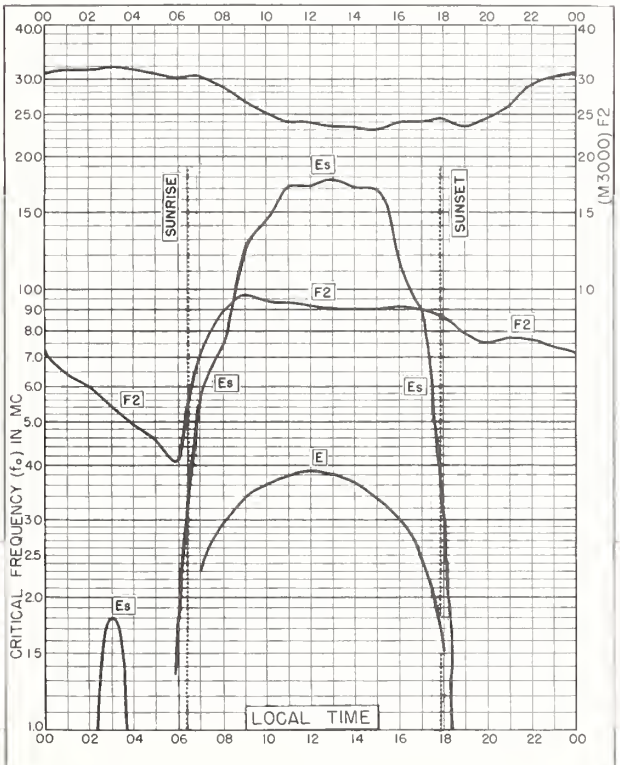


Fig. 3. HUANCAYO, PERU
12.0°S, 75.3°W JULY 1960

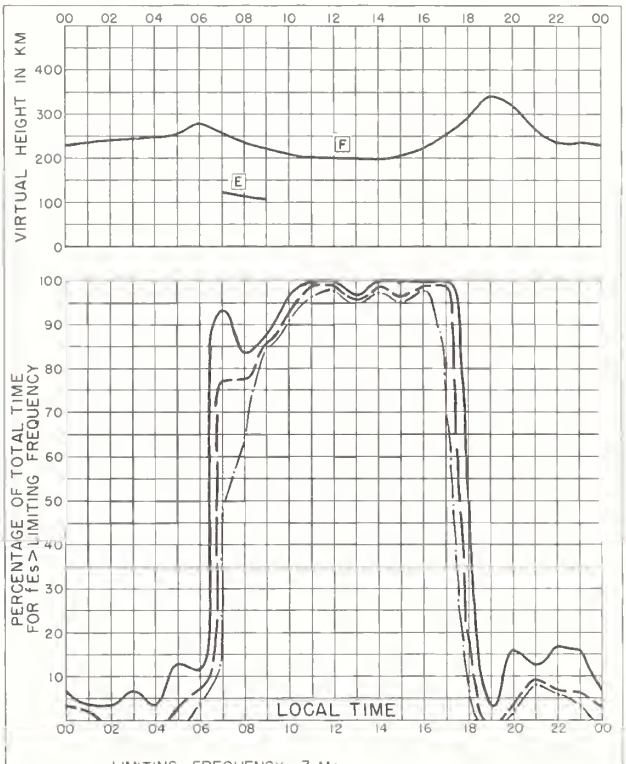


Fig. 4. HUANCAYO, PERU JULY 1960

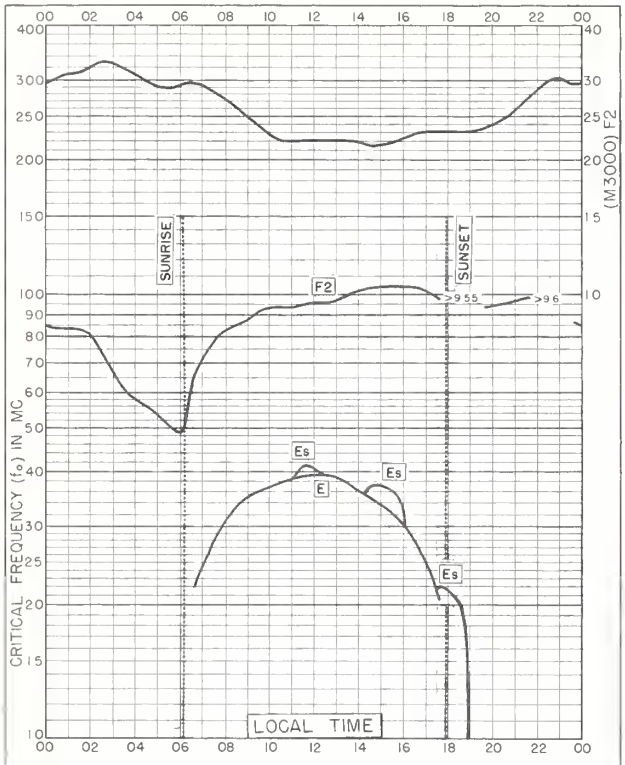


Fig. 5. TALARA, PERU
4.6°S, 81.3°W JUNE 1960

NBS 503

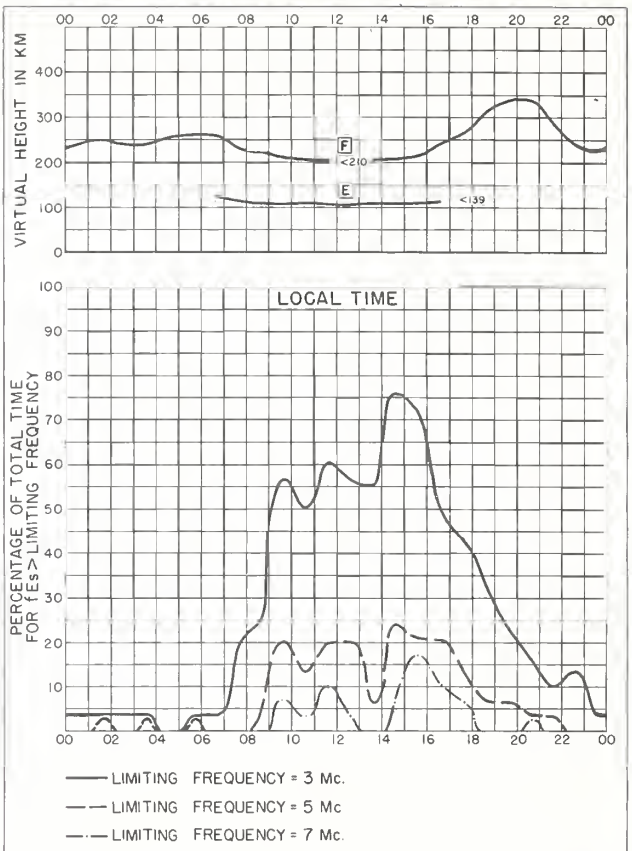


Fig. 6. TALARA, PERU JUNE 1960

NBS 490

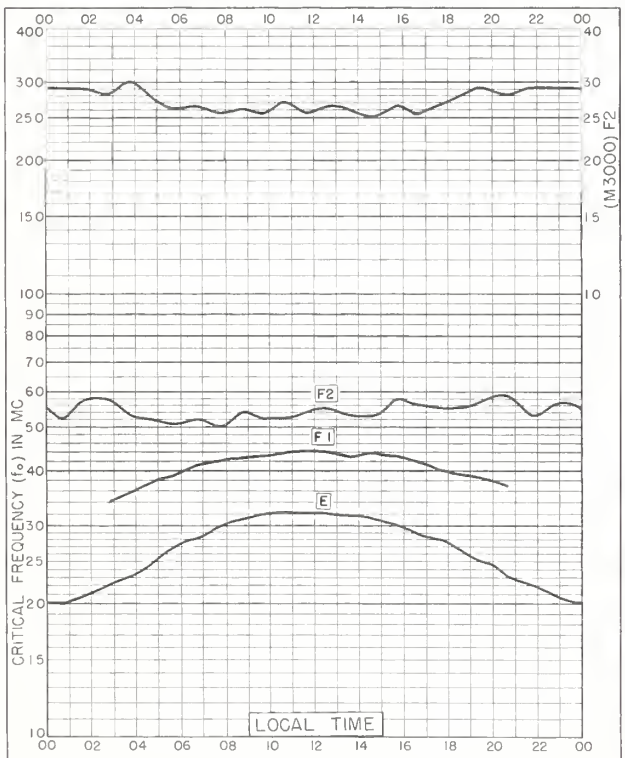


Fig 7. RESOLUTE BAY, CANADA
74.7°N, 94.9°W MAY 1960

NBS 503

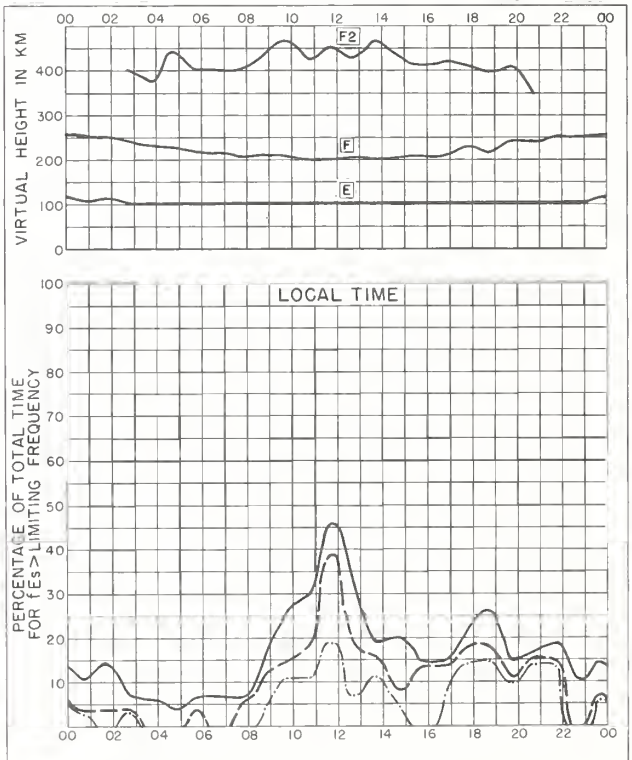


Fig. 8. RESOLUTE BAY, CANADA MAY 1960

NBS 490

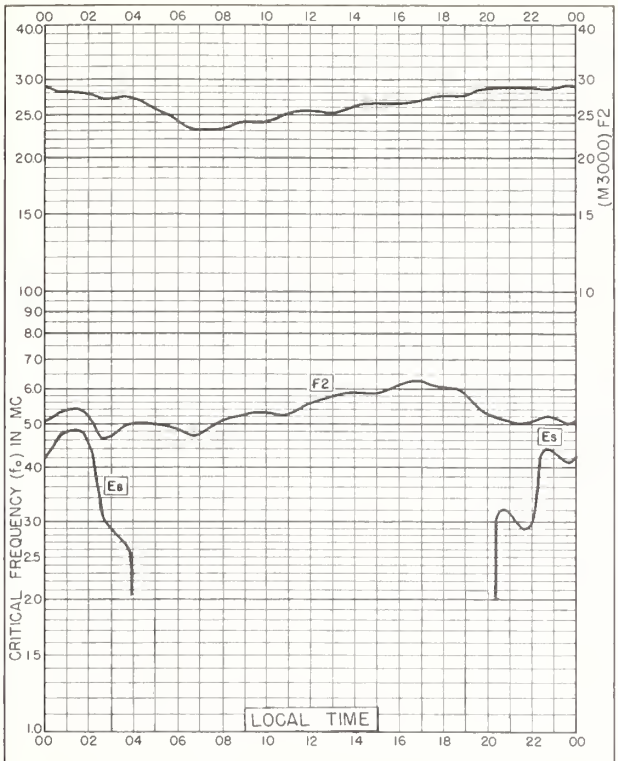


Fig. 9. POINT BARROW, ALASKA
71.3°N, 156.8°W MAY 1960

NBS 503

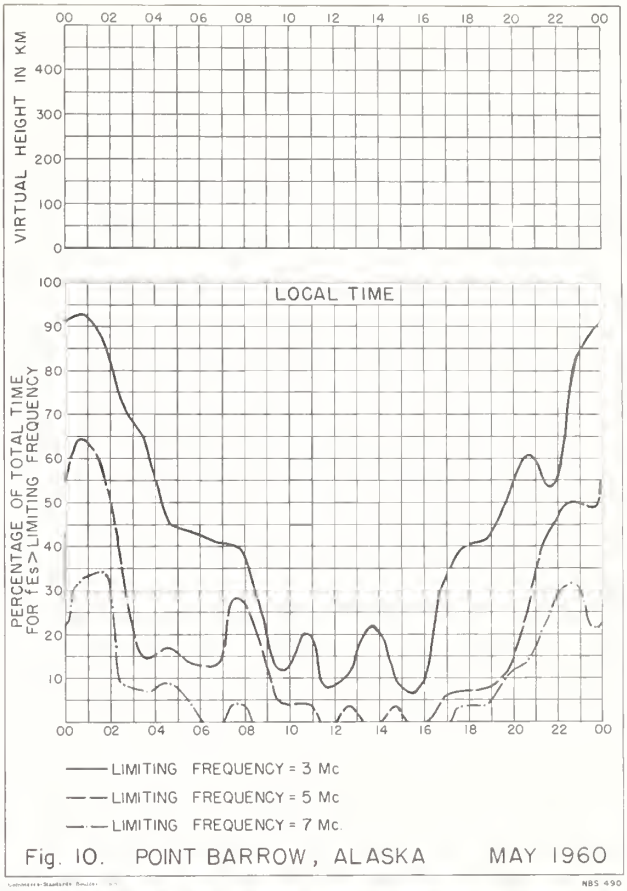


Fig. 10. POINT BARROW, ALASKA MAY 1960

NBS 490

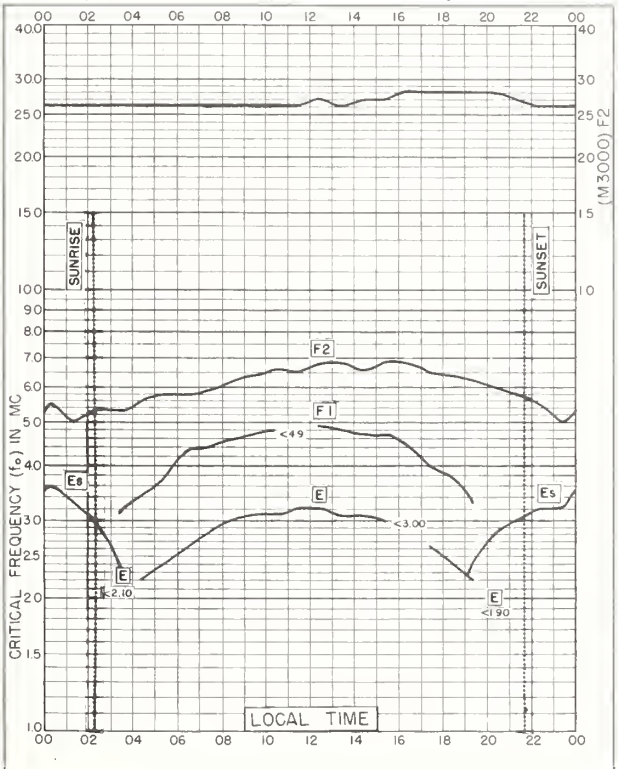


Fig. 11. KIRUNA, SWEDEN
67.8°N, 20.3°E MAY 1960

NBS 503

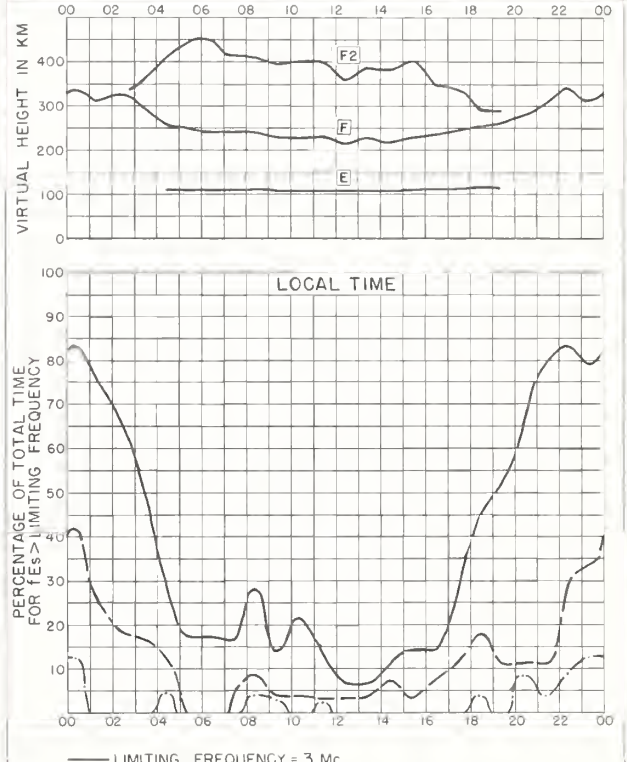


Fig. 12. KIRUNA, SWEDEN MAY 1960

NBS 490

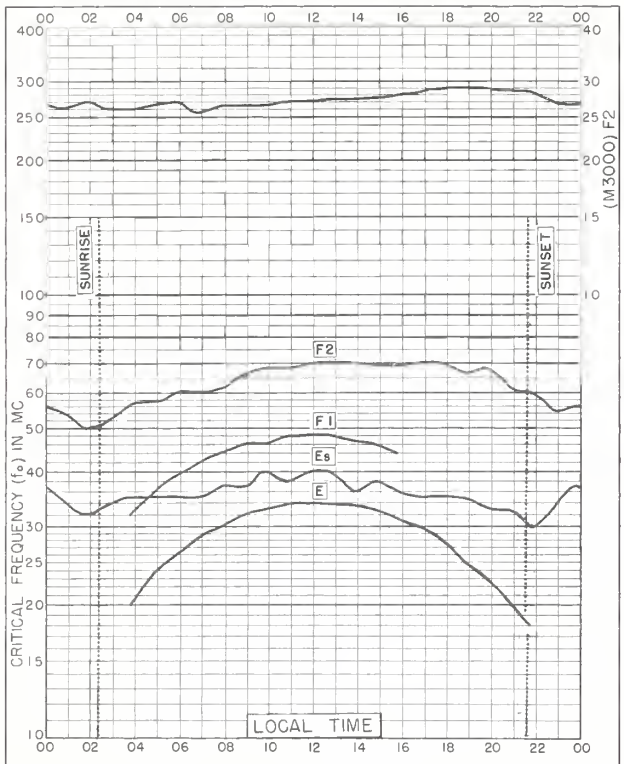


Fig. 13. SODANKYLA, FINLAND
67.4°N, 26.6°E MAY 1960

NBS 503

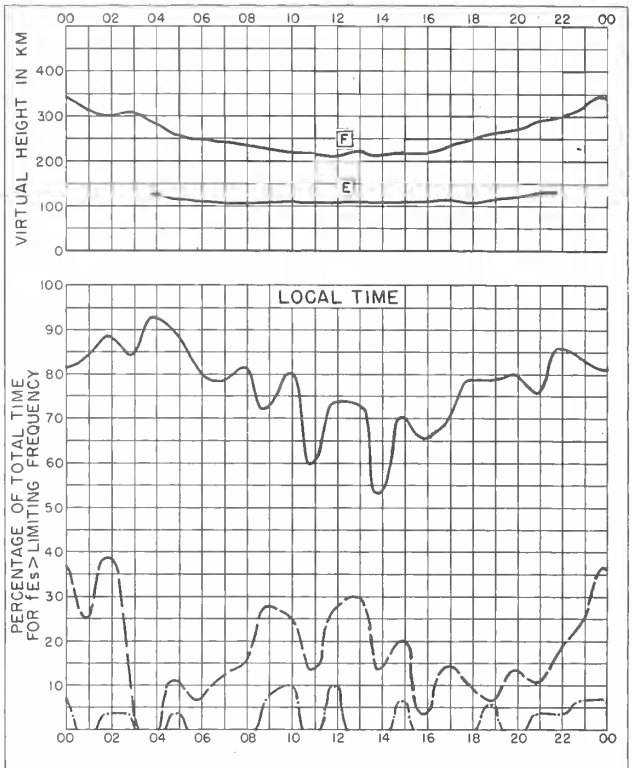


Fig. 14. SODANKYLA, FINLAND MAY 1960

NBS 490

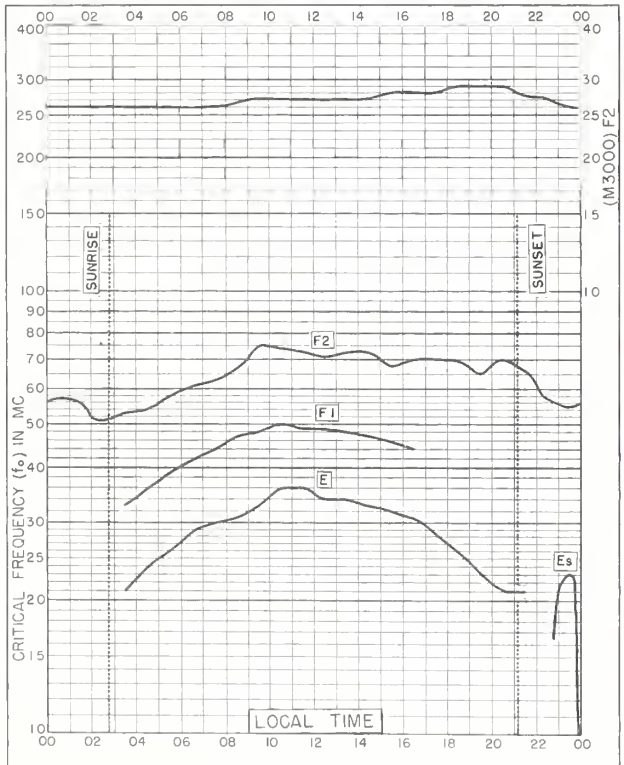


Fig. 15. LULEA, SWEDEN
65.6°N, 22.1°E MAY 1960

NBS 503

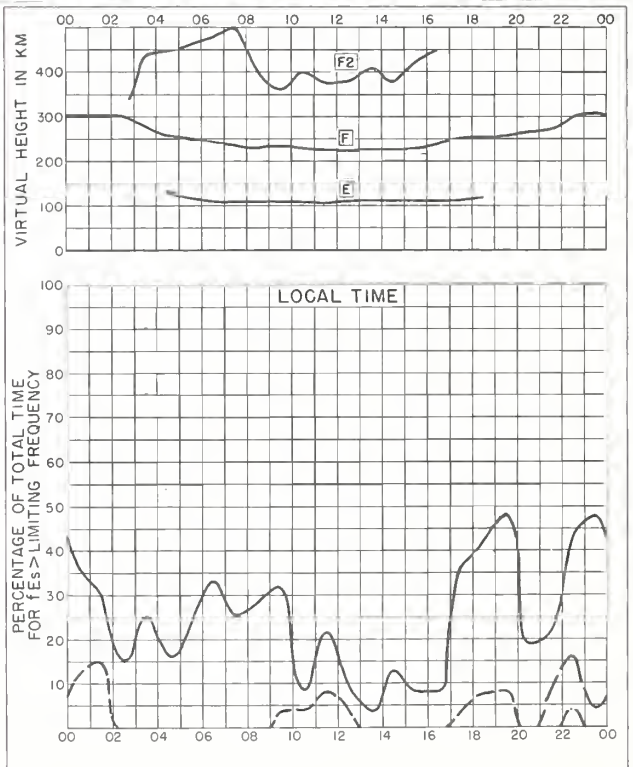


Fig. 16. LULEA, SWEDEN MAY 1960

NBS 490

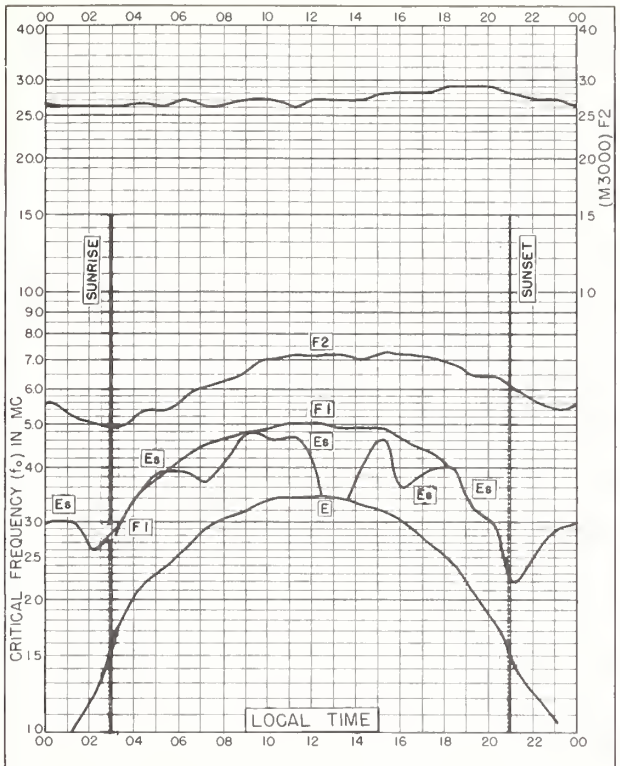


Fig. 17. LYCKSELE, SWEDEN
64.6°N, 18.8°E MAY 1960

NBS 503

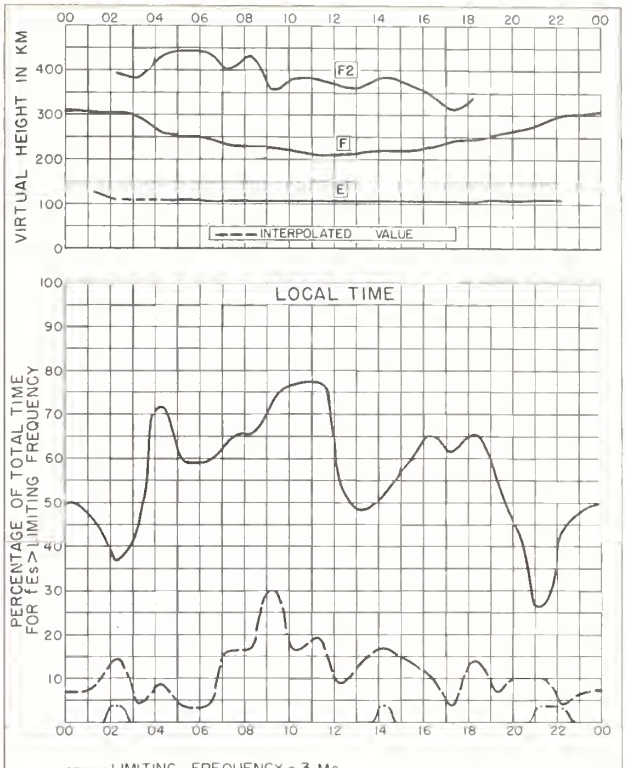


Fig. 18. LYCKSELE, SWEDEN MAY 1960

NBS 490

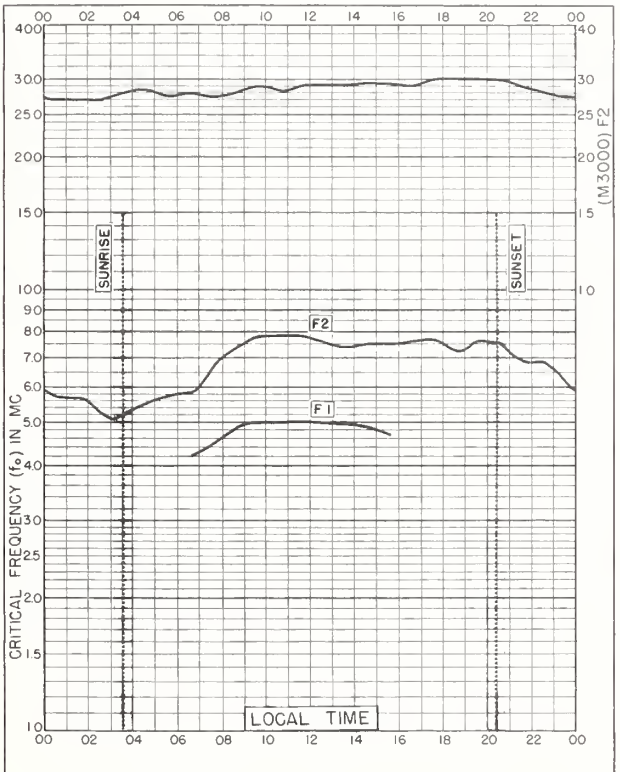


Fig. 19. NURMIJARVI, FINLAND
60.5°N, 24.6°E MAY 1960

NBS 503

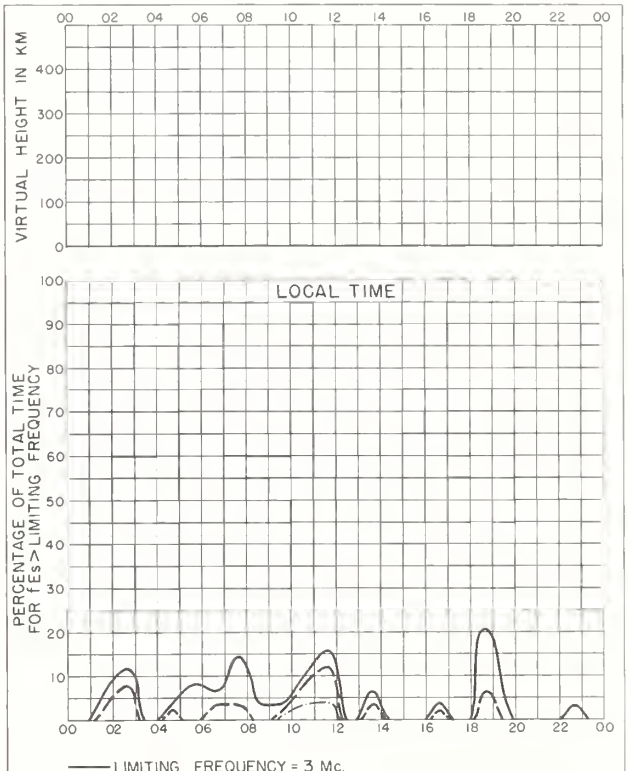


Fig. 20. NURMIJARVI, FINLAND MAY 1960

NBS 490

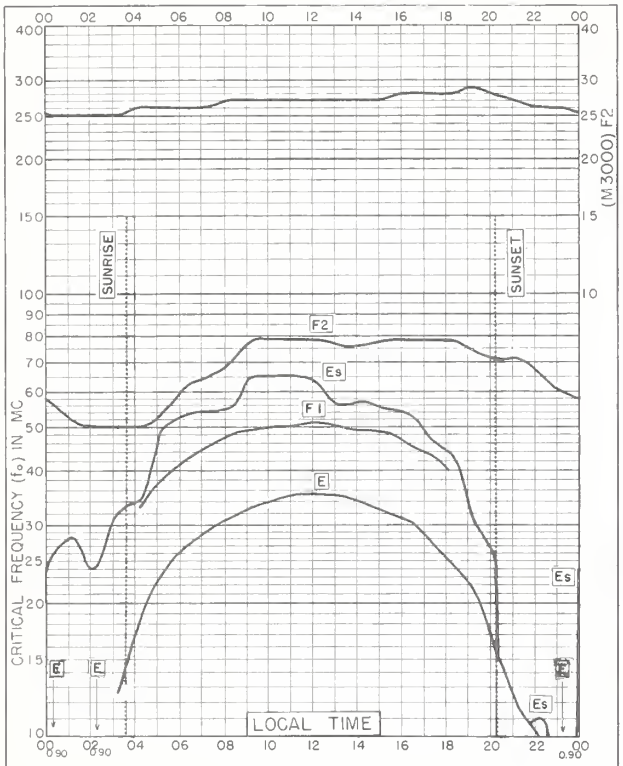


Fig. 21. UPSALA, SWEDEN
59.8°N, 17.6°E
MAY 1960

NBS 503

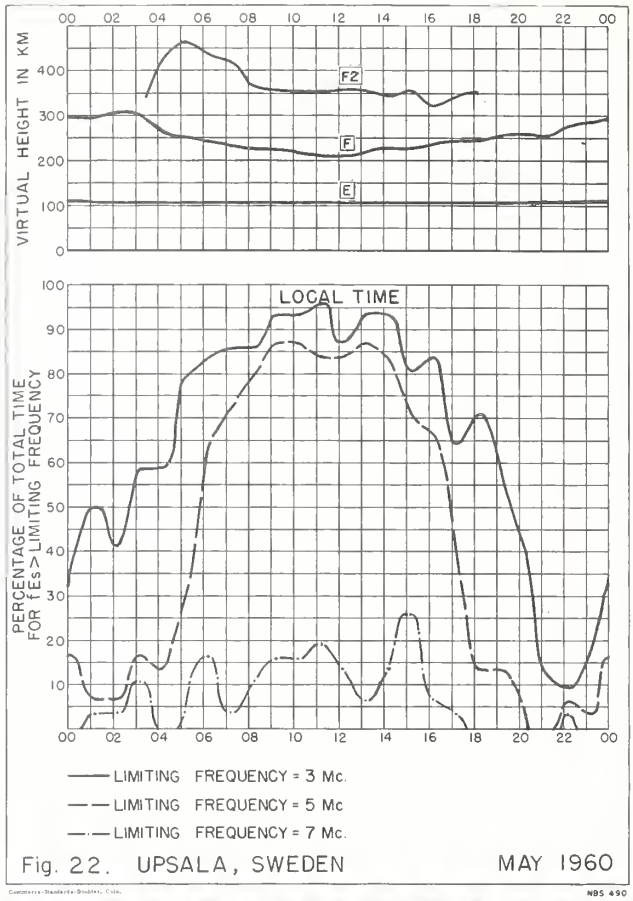


Fig. 22. UPSALA, SWEDEN
MAY 1960

NBS 490

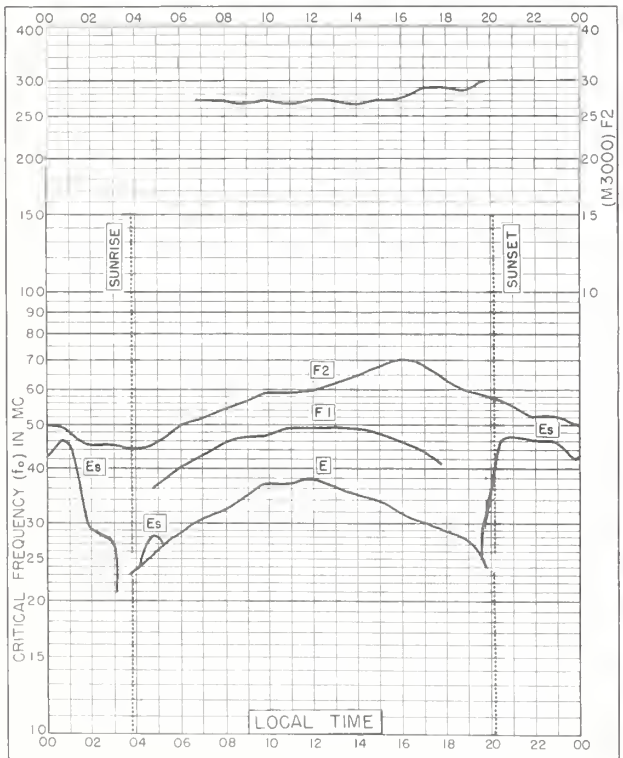


Fig. 23. CHURCHILL, CANADA
58.8°N, 94.2°W
MAY 1960

NBS 503

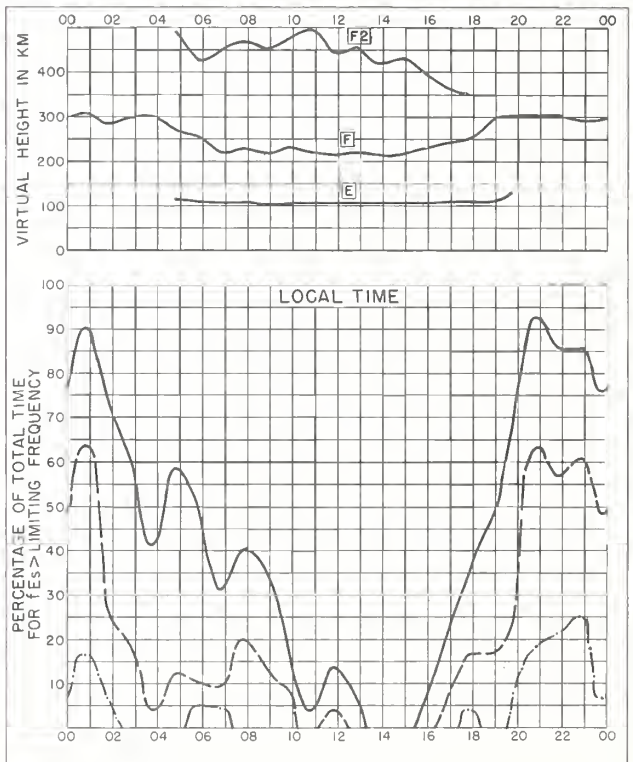


Fig. 24. CHURCHILL, CANADA
MAY 1960

NBS 490

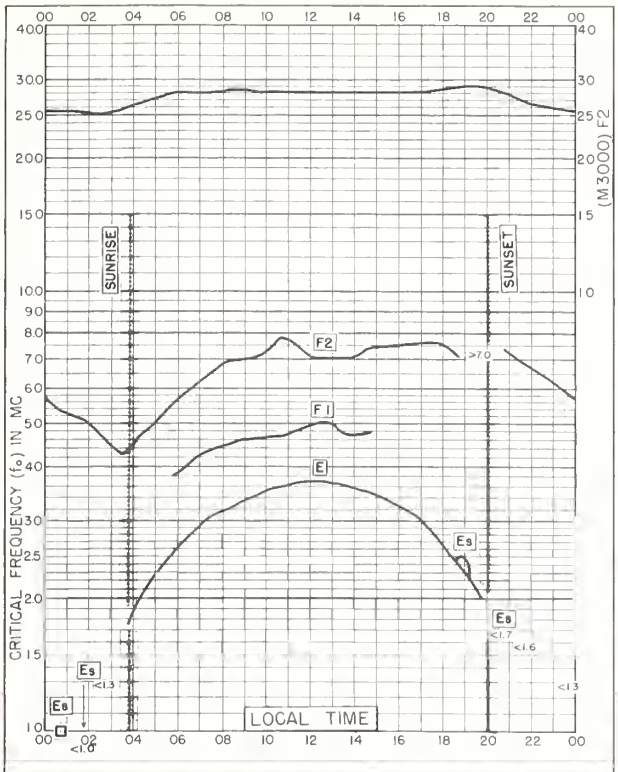


Fig. 25. INVERNESS, SCOTLAND
57.4°N, 4.2°W MAY 1960

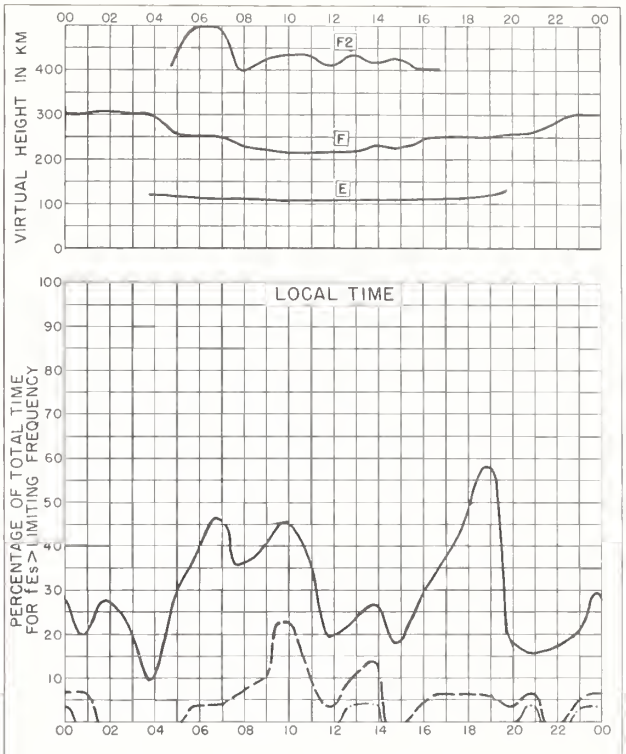


Fig. 26. INVERNESS, SCOTLAND MAY 1960

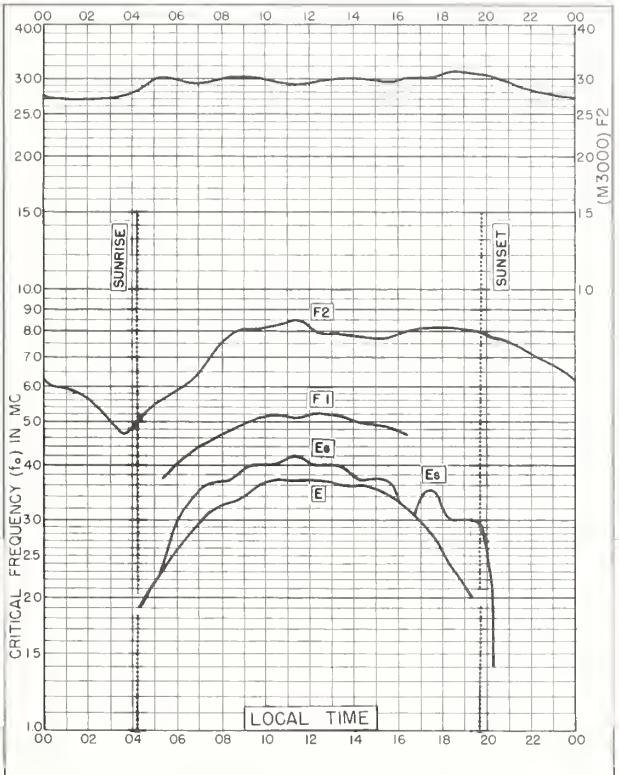


Fig. 27. De BILT, HOLLAND
52.1°N, 5.2°E MAY 1960

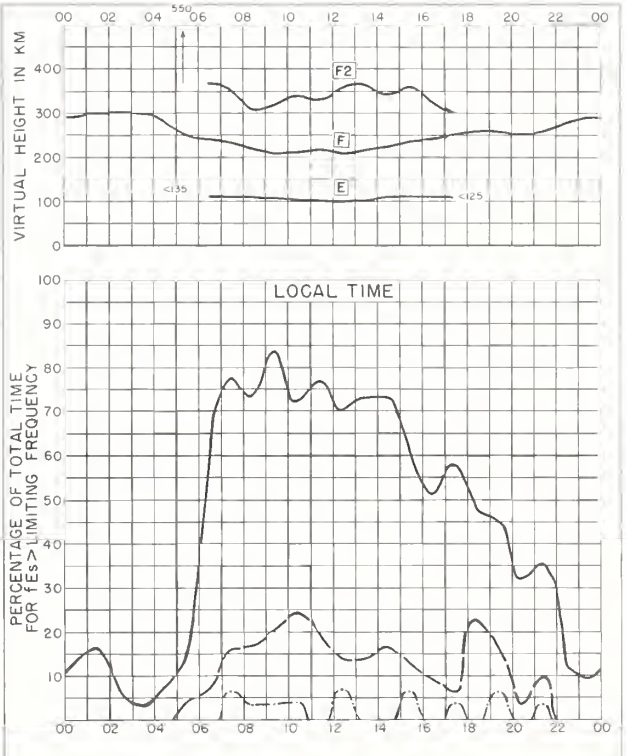


Fig. 28. De BILT, HOLLAND MAY 1960

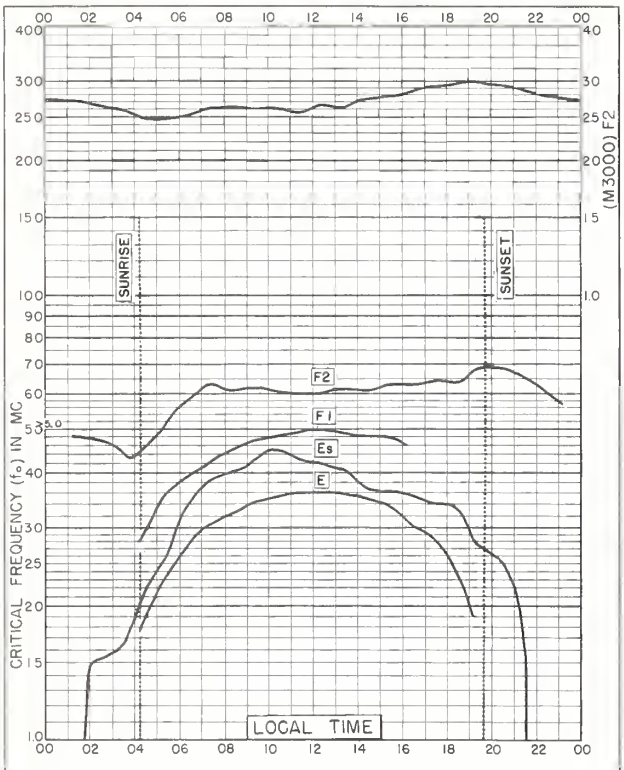


Fig. 29. ADAK, ALASKA
51.9°N, 176.6°W MAY 1960

NBS 503

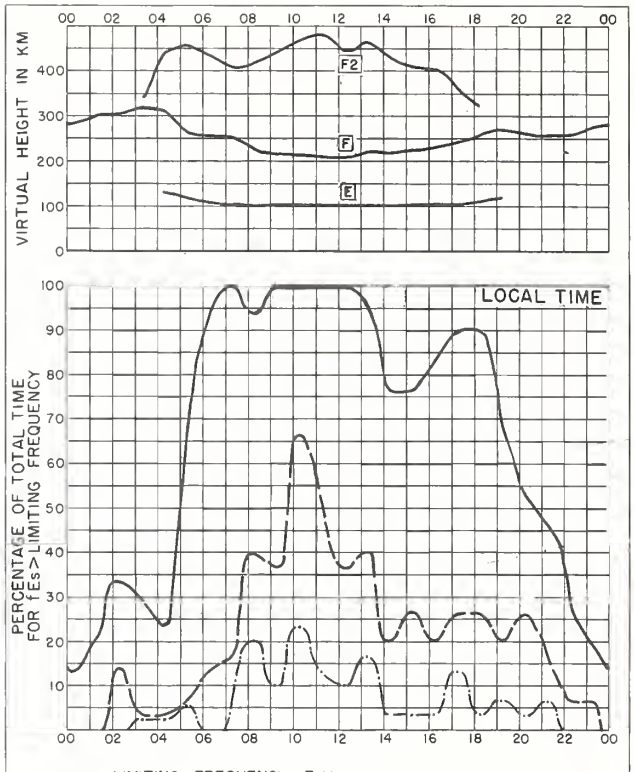


Fig. 30. ADAK, ALASKA MAY 1960

NBS 490

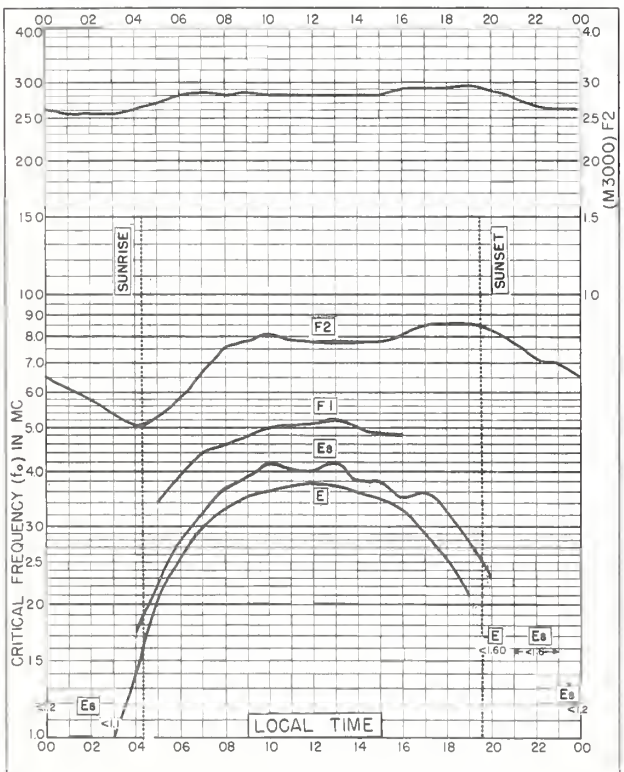


Fig. 31. SLOUGH, ENGLAND
51.5°N, 0.6°W MAY 1960

NBS 503

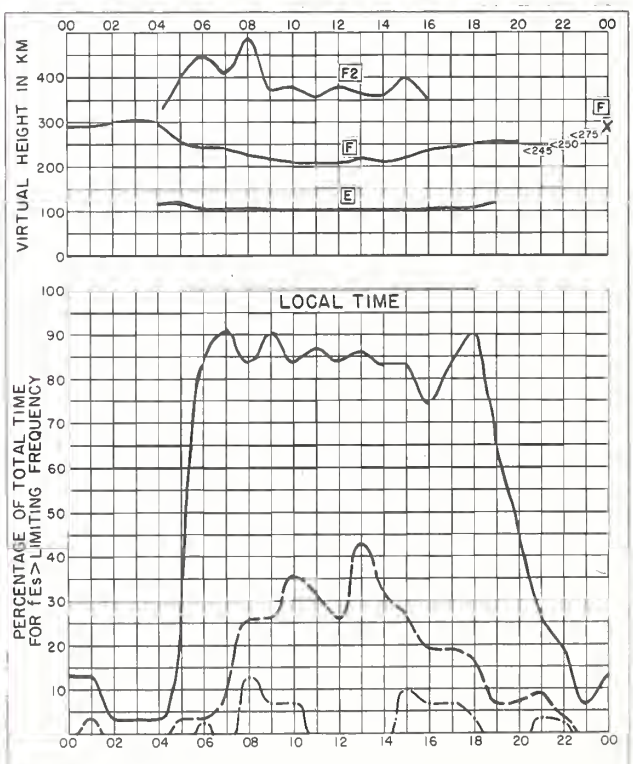


Fig. 32. SLOUGH, ENGLAND MAY 1960

NBS 490

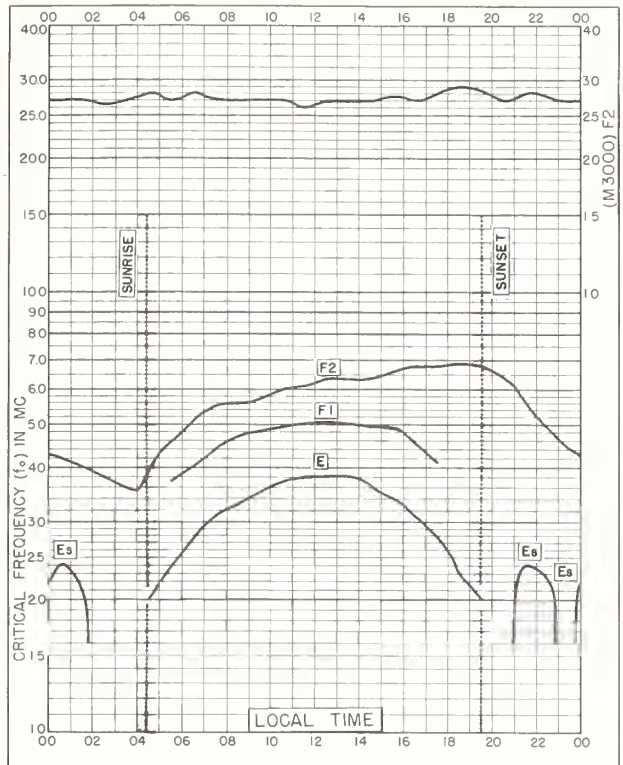


Fig. 33. WINNIPEG, CANADA
49.9°N, 97.4°W MAY 1960

NBS 503

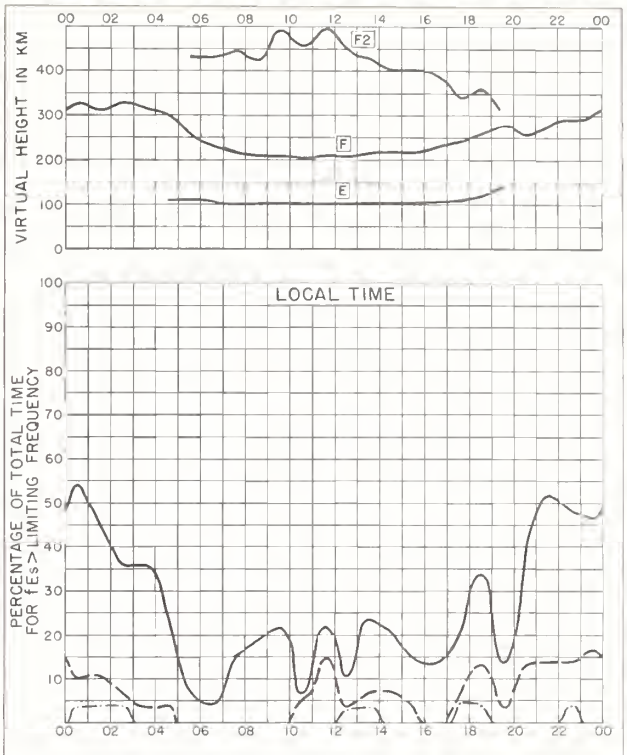


Fig. 34. WINNIPEG, CANADA MAY 1960

NBS 490

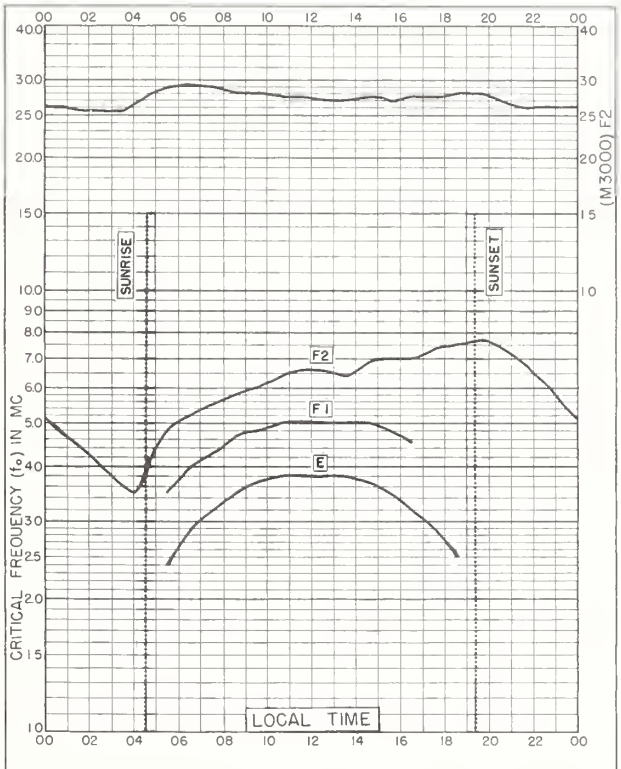


Fig. 35. ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W MAY 1960

NBS 503

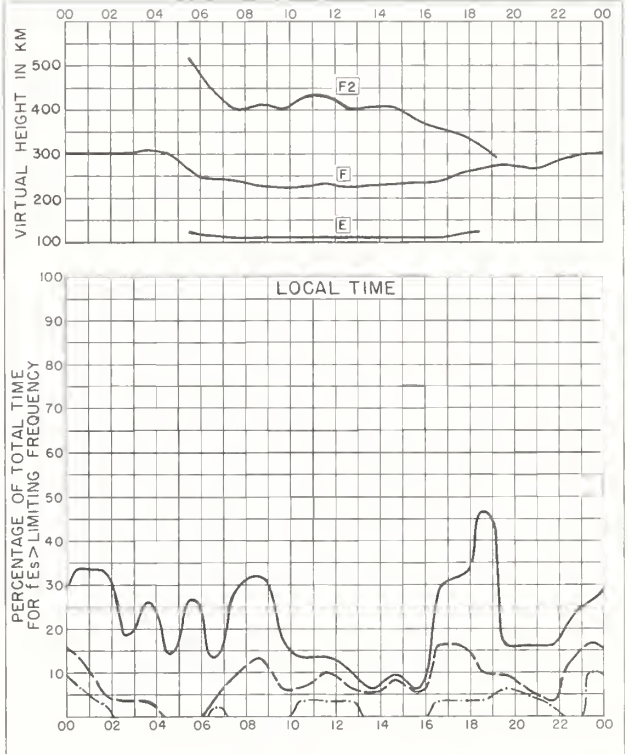


Fig. 36. ST. JOHN'S, NEWFOUNDLAND MAY 1960

NBS 490

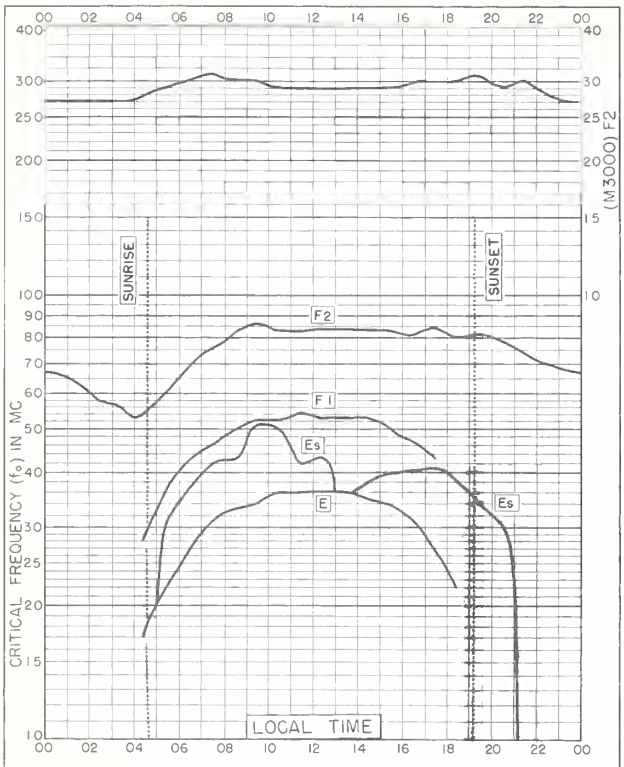


Fig. 37. SOTTENS, SWITZERLAND
46.6°N, 6.7°E MAY 1960

NBS 503

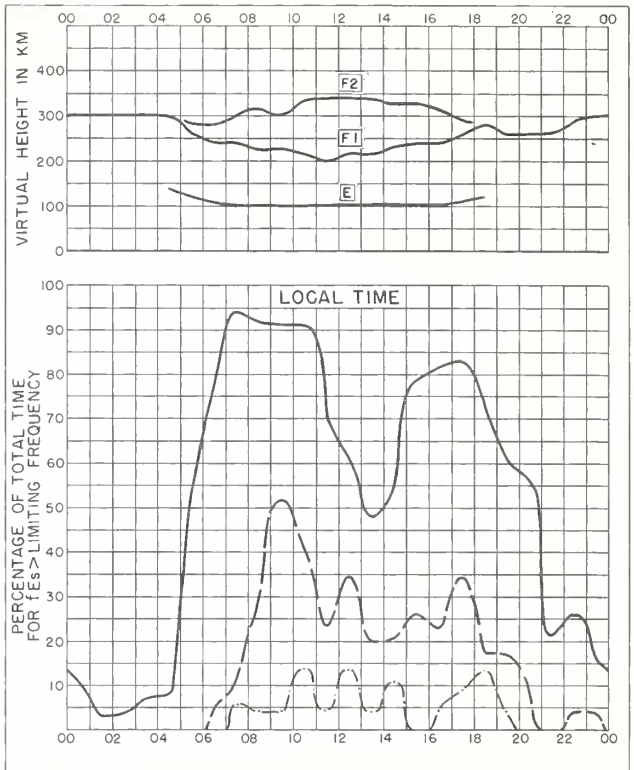


Fig. 38. SOTTENS, SWITZERLAND MAY 1960

NBS 490

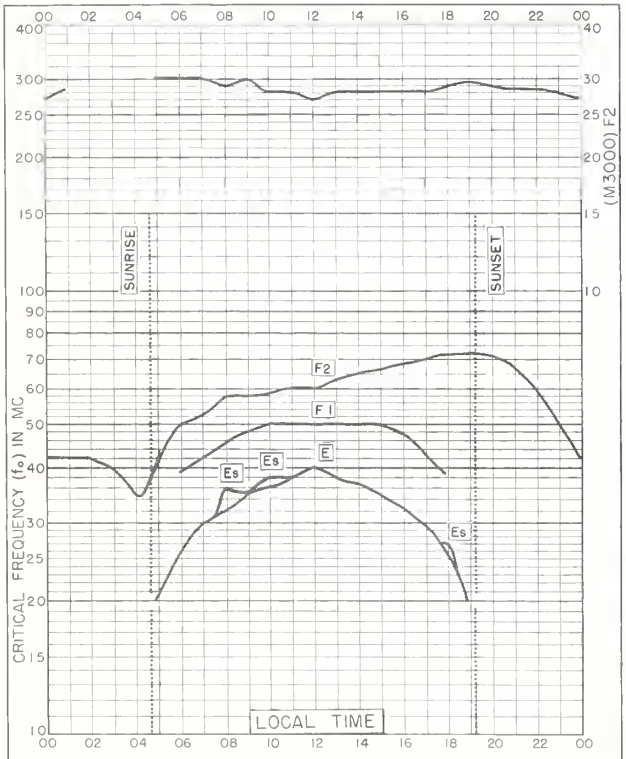


Fig. 39. OTTAWA, CANADA
45.4°N, 75.9°W MAY 1960

NBS 503

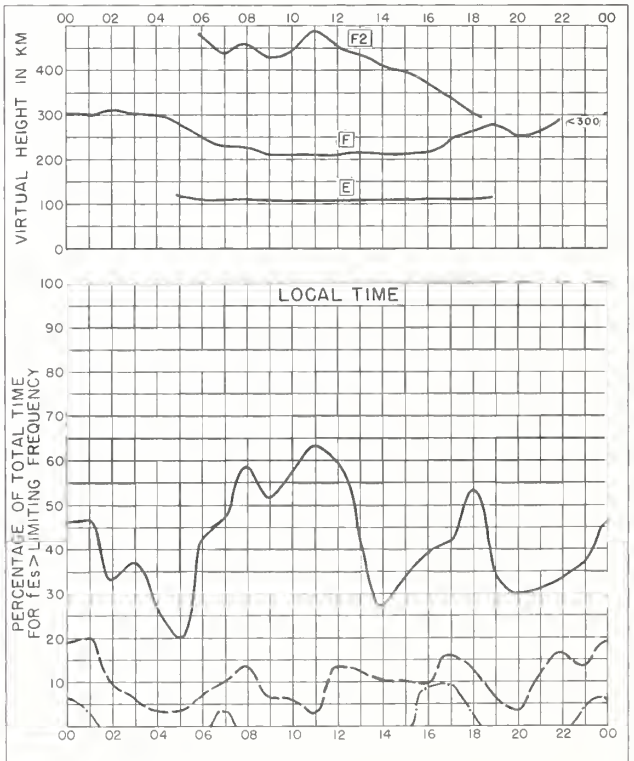


Fig. 40. OTTAWA, CANADA MAY 1960

NBS 490

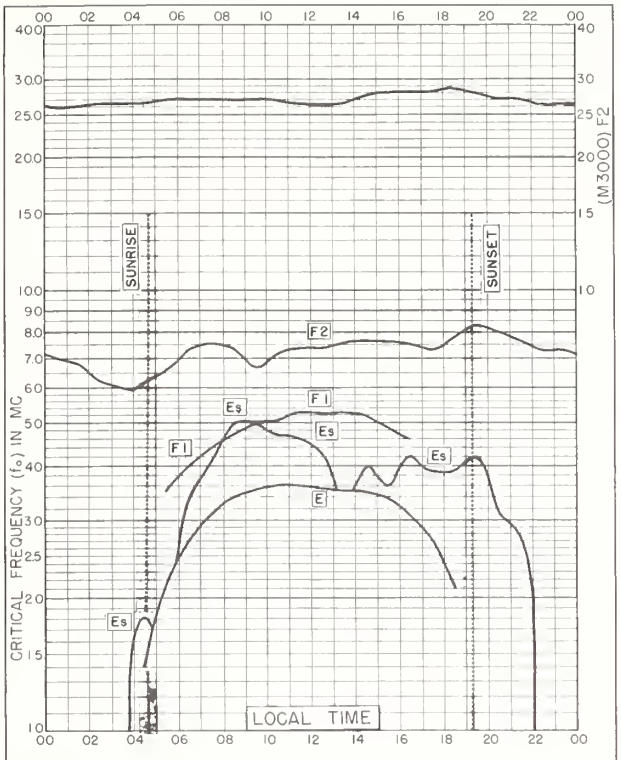


Fig. 41. WAKKANAI, JAPAN
45.4°N, 141.7°E MAY 1960

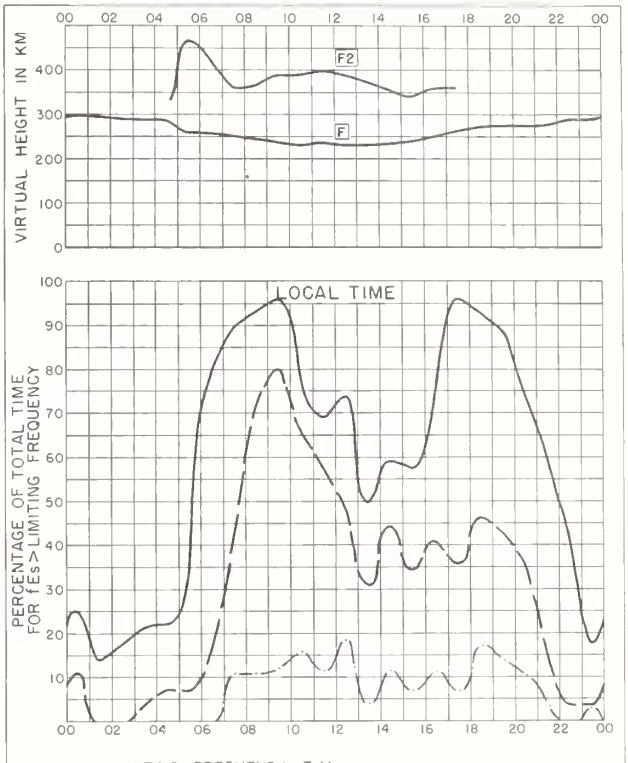


Fig. 42. WAKKANAI, JAPAN MAY 1960

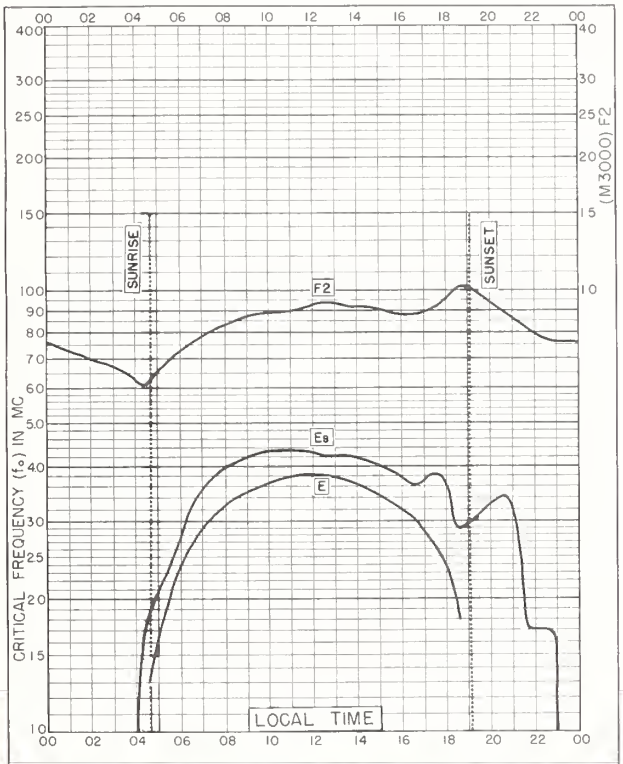
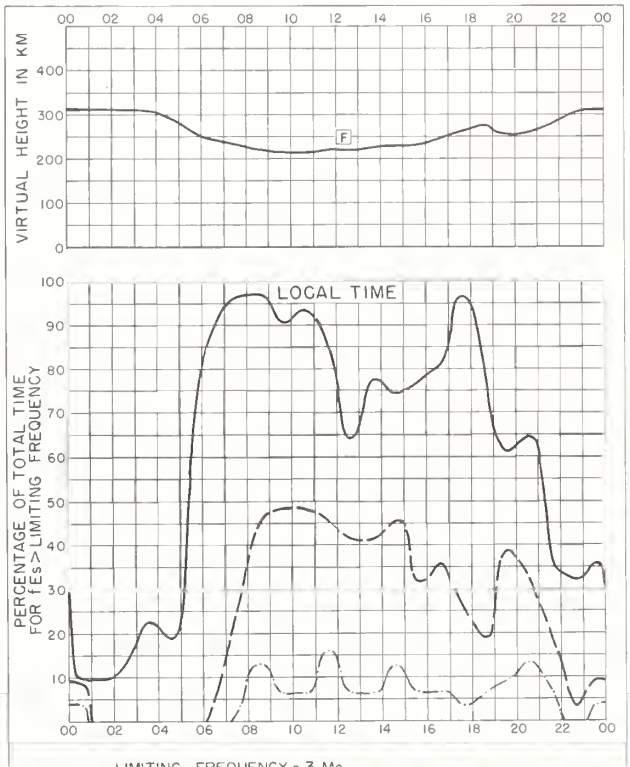


Fig. 43. GENOA (MONTE CAPELLINO), ITALY
44.6°N, 9.0°E MAY 1960



MAY 1960
Fig. 44. GENOA (MONTE CAPELLINO), ITALY

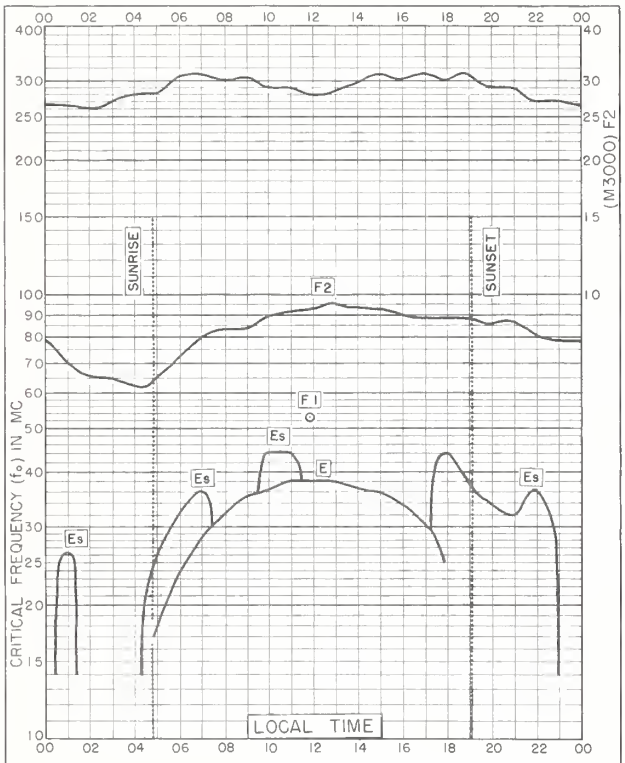


Fig. 45. ROME, ITALY
41.8°N, 12.5°E MAY 1960

NBS 503

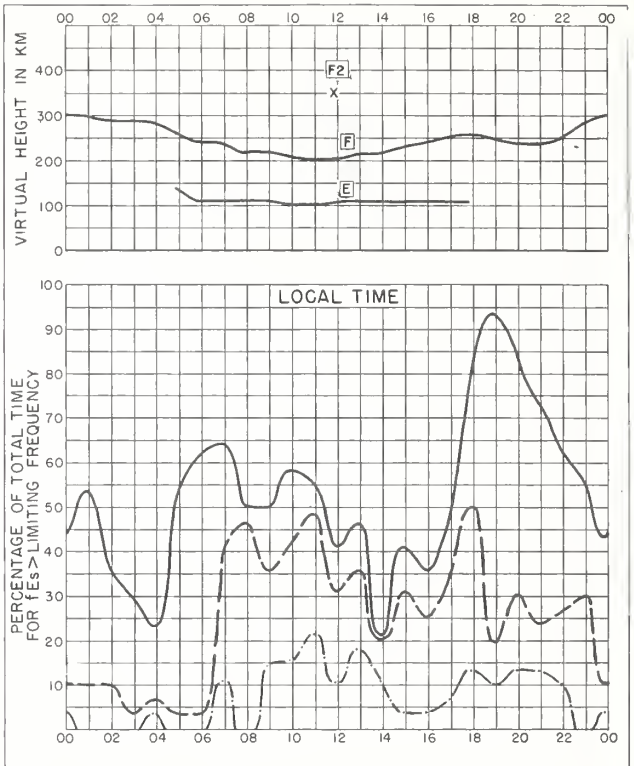


Fig. 46. ROME, ITALY MAY 1960

NBS 490

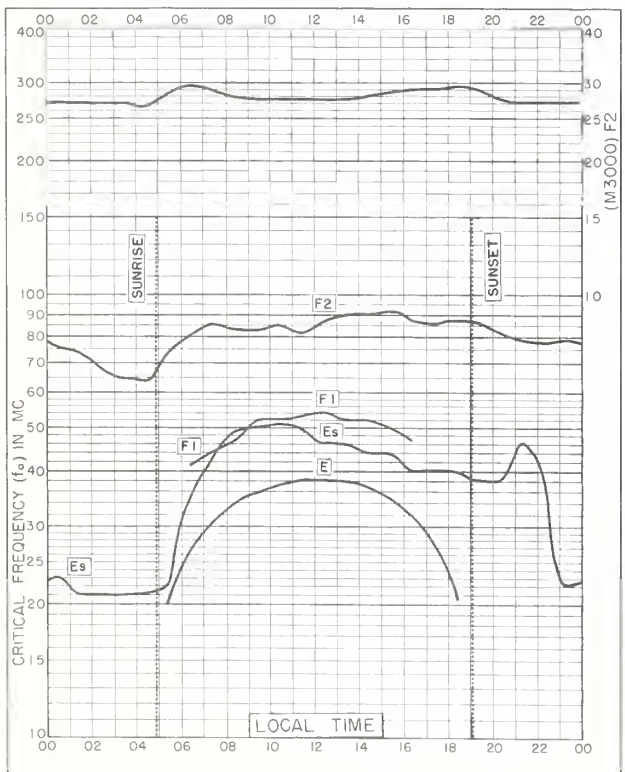


Fig. 47. AKITA, JAPAN
39.7°N, 140.1°E MAY 1960

NBS 503

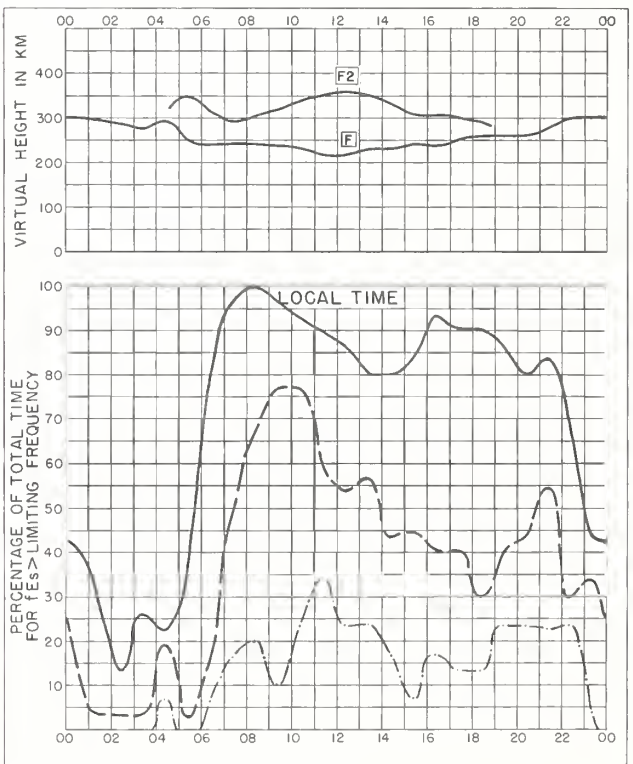


Fig. 48. AKITA, JAPAN MAY 1960

NBS 490

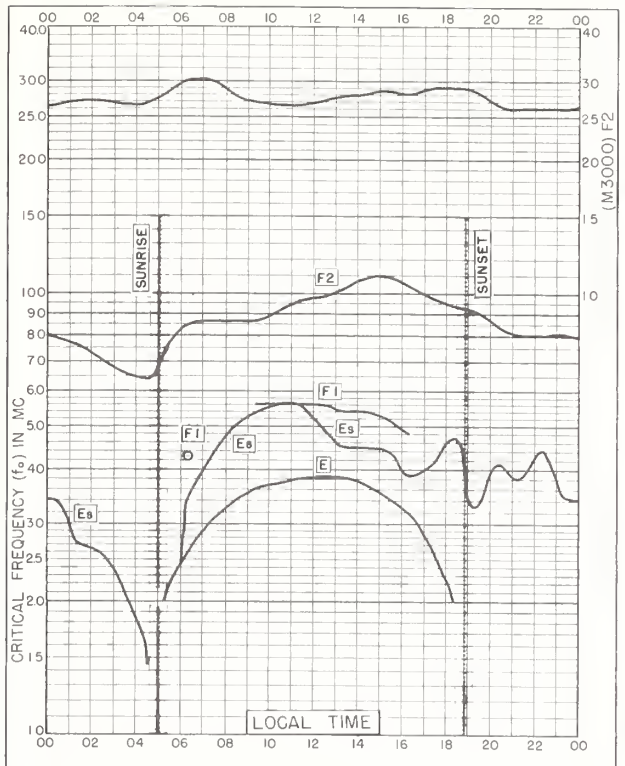


Fig. 49. TOKYO, JAPAN
35.7°N, 139.5°E MAY 1960

NBS 503

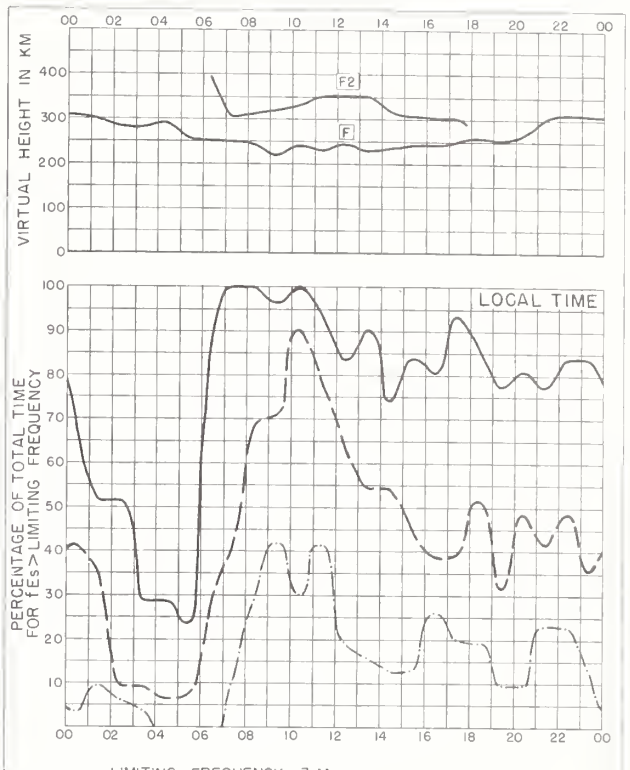


Fig. 50. TOKYO, JAPAN MAY 1960

NBS 490

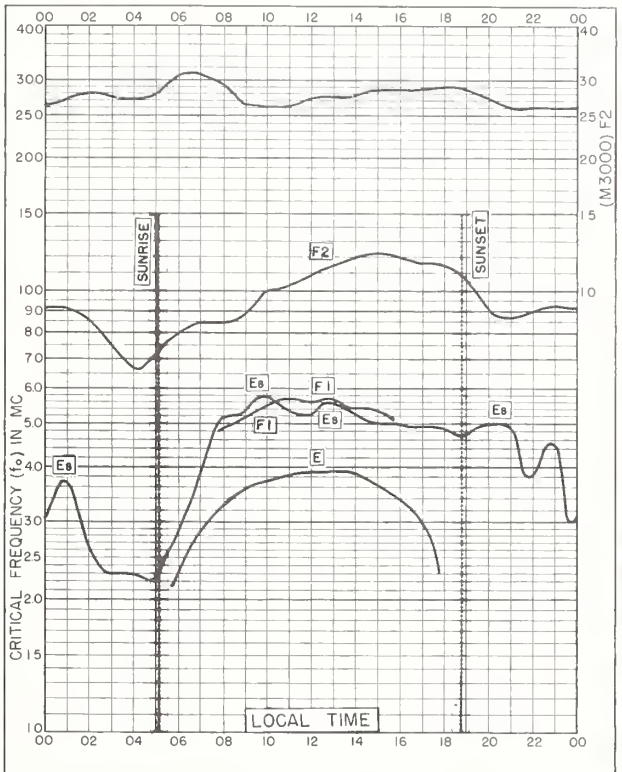


Fig. 51. YAMAGAWA, JAPAN
31.2°N, 130.6°E MAY 1960

NBS 503

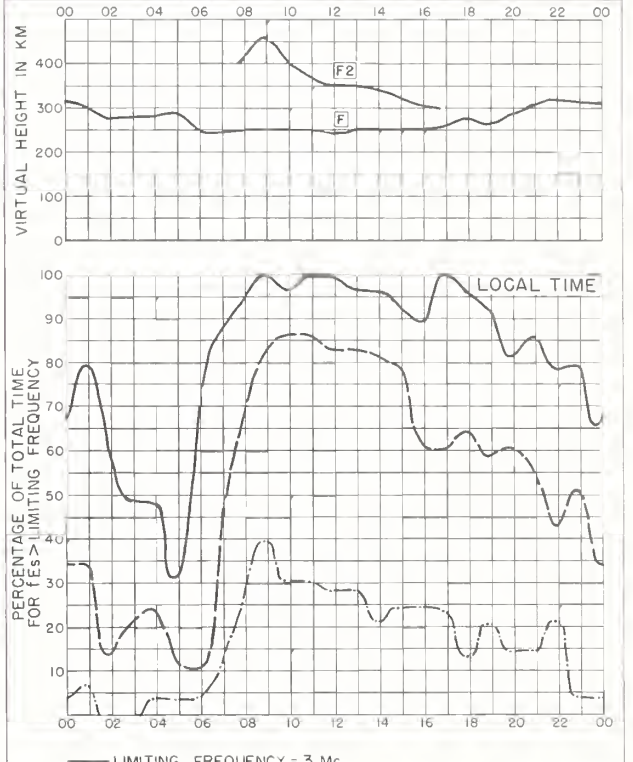


Fig. 52. YAMAGAWA, JAPAN MAY 1960

NBS 490

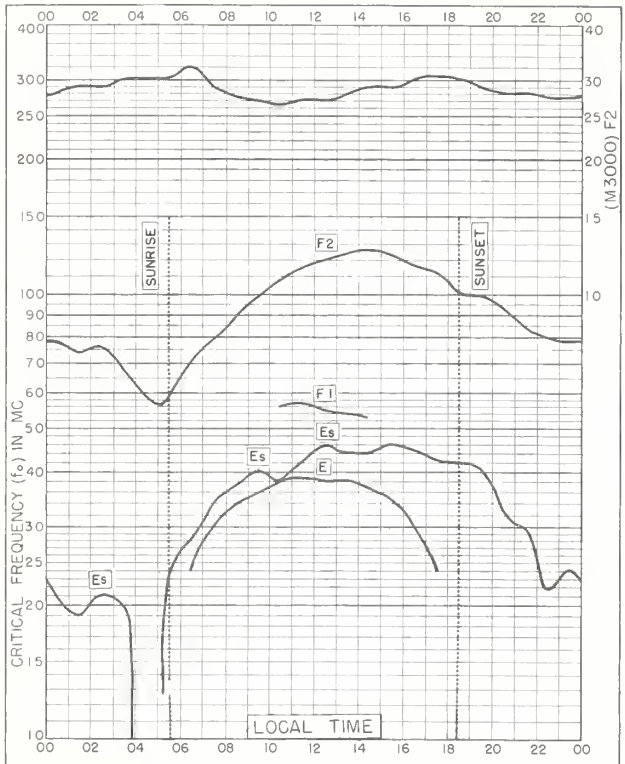


Fig. 53. EL CERILLO, MEXICO
19.3°N, 99.5° W MAY 1960

NBS 503

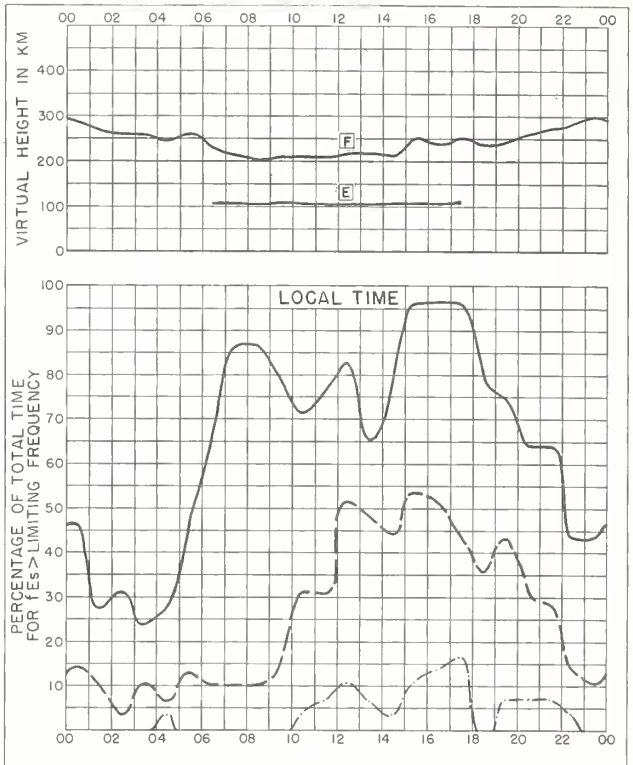


Fig. 54. EL CERILLO, MEXICO MAY 1960

NBS 490

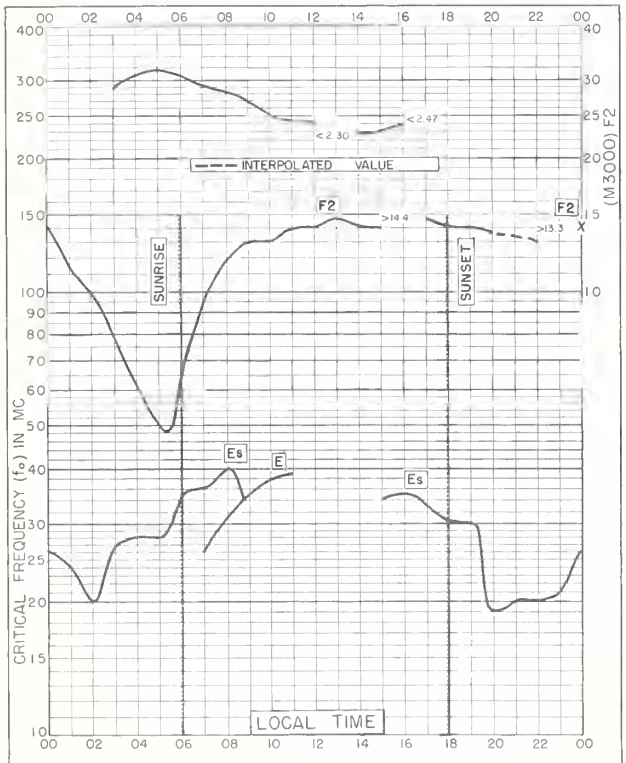


Fig. 55. BUNIA, BELGIAN CONGO
1.5°N, 30.2°E MAY 1960

NBS 503

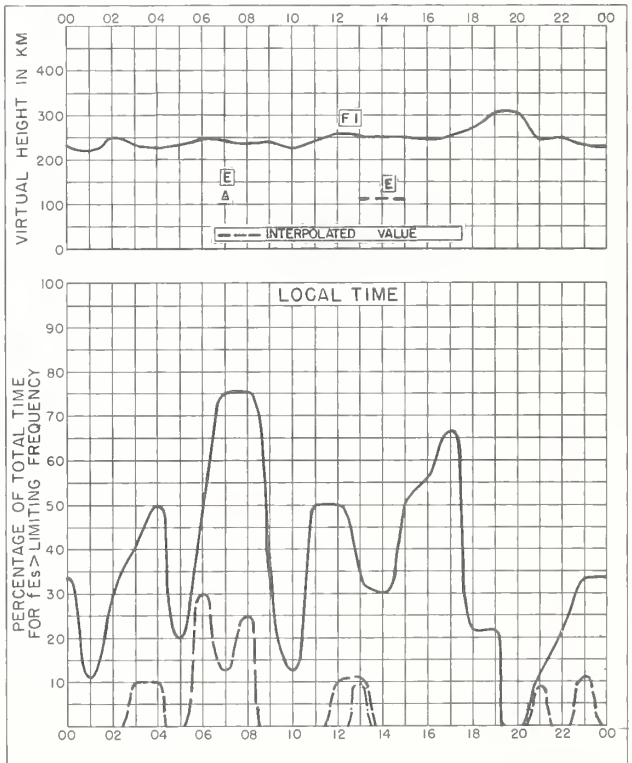


Fig. 56. BUNIA, BELGIAN CONGO MAY 1960

NBS 490

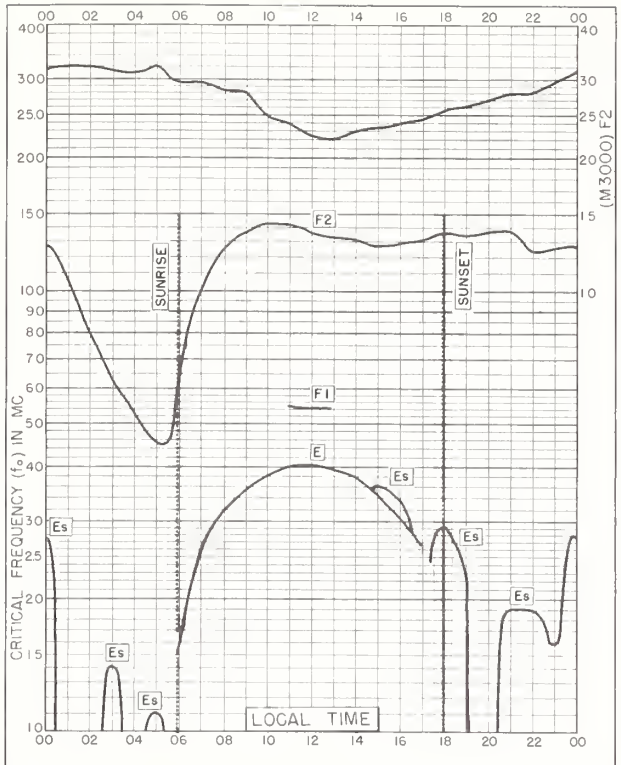


Fig. 57. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E MAY 1960

NBS 503

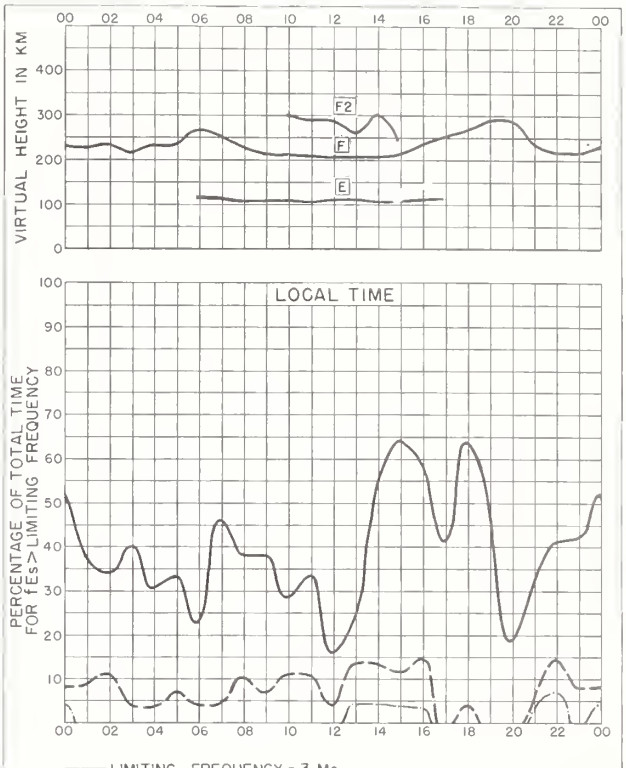


Fig. 58. SINGAPORE, BRITISH MALAYA MAY 1960

NBS 490

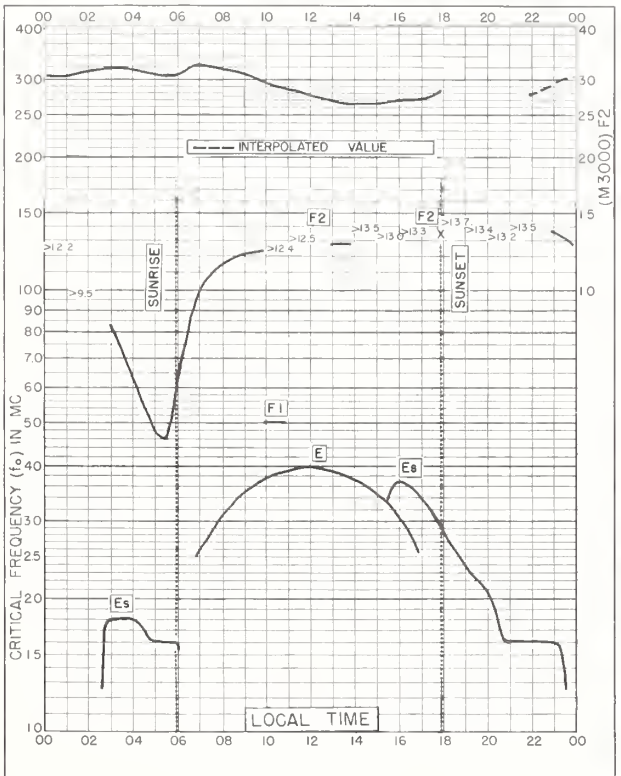


Fig. 59. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E MAY 1960

NBS 503

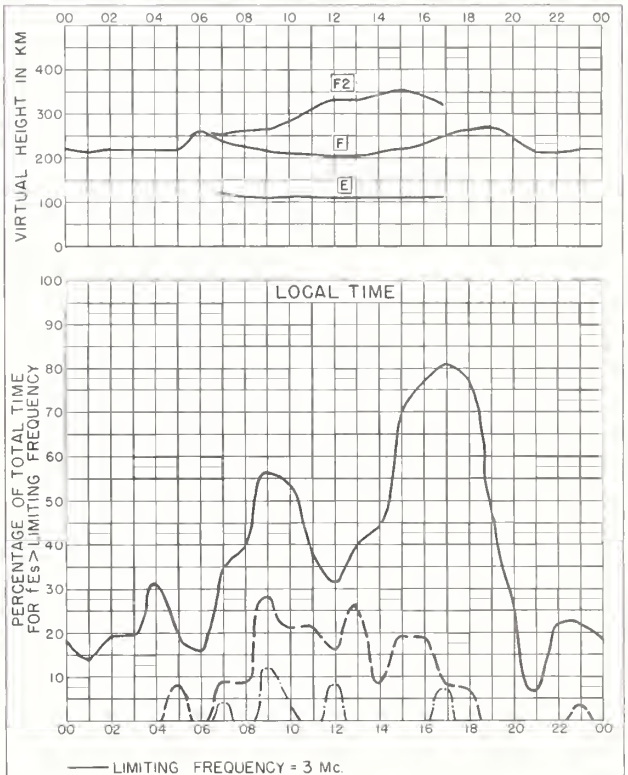


Fig. 60. LWIRO, BELGIAN CONGO MAY 1960

NBS 490

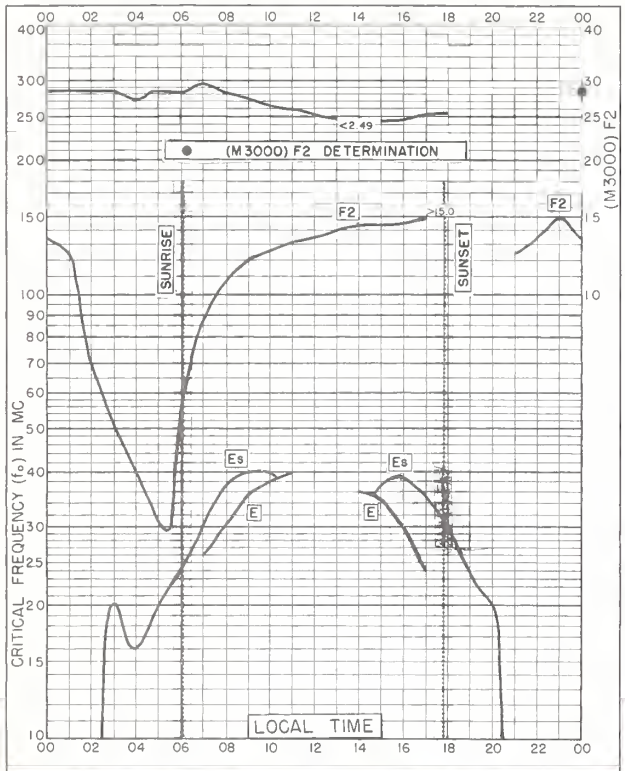


Fig. 61. LEOPOLDVILLE, BELGIAN CONGO
4.4°S, 15.2°E MAY 1960

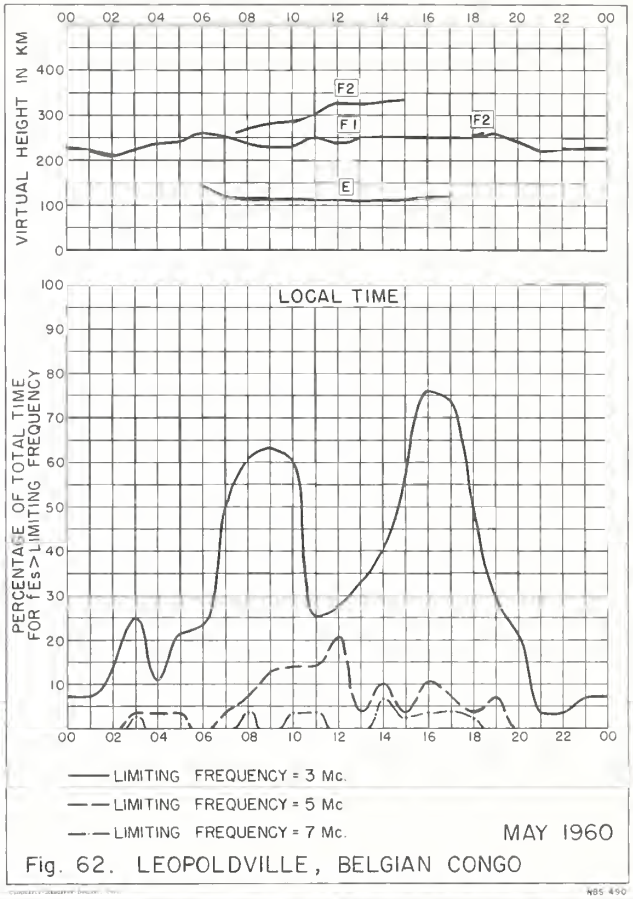


Fig. 62. LEOPOLDVILLE, BELGIAN CONGO MAY 1960

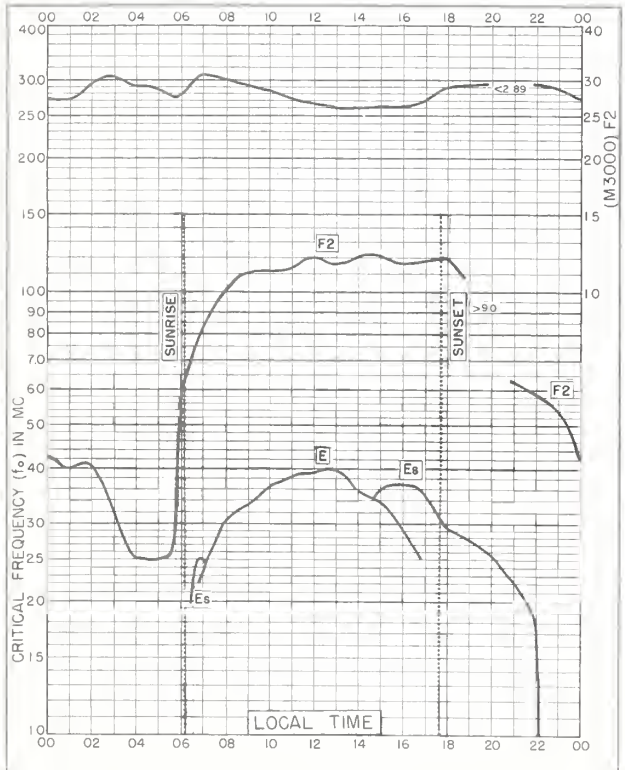


Fig. 63. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E MAY 1960

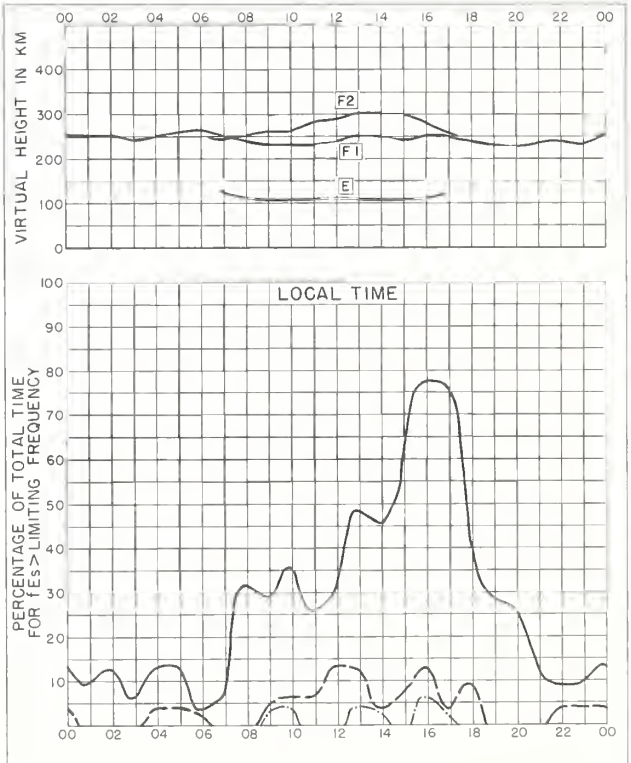


Fig. 64. ELISABETHVILLE, BELGIAN CONGO. MAY 1960

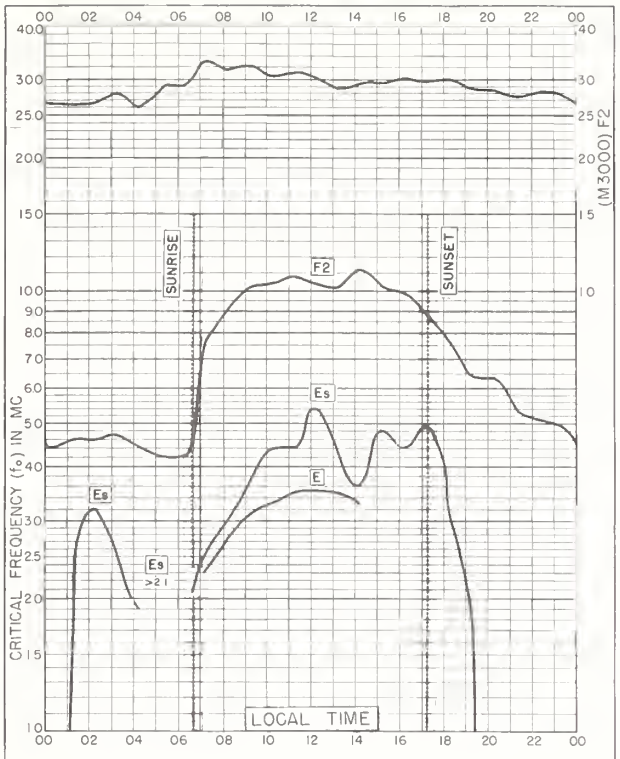


Fig. 65. BRISBANE, AUSTRALIA
27.5°S, 152.9°E MAY 1960

NBS 503

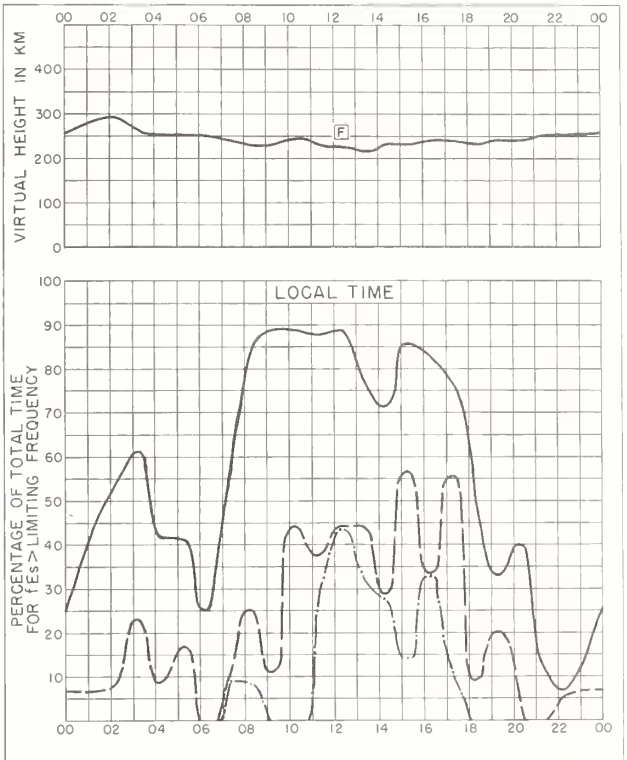


Fig. 66. BRISBANE, AUSTRALIA MAY 1960

NBS 490

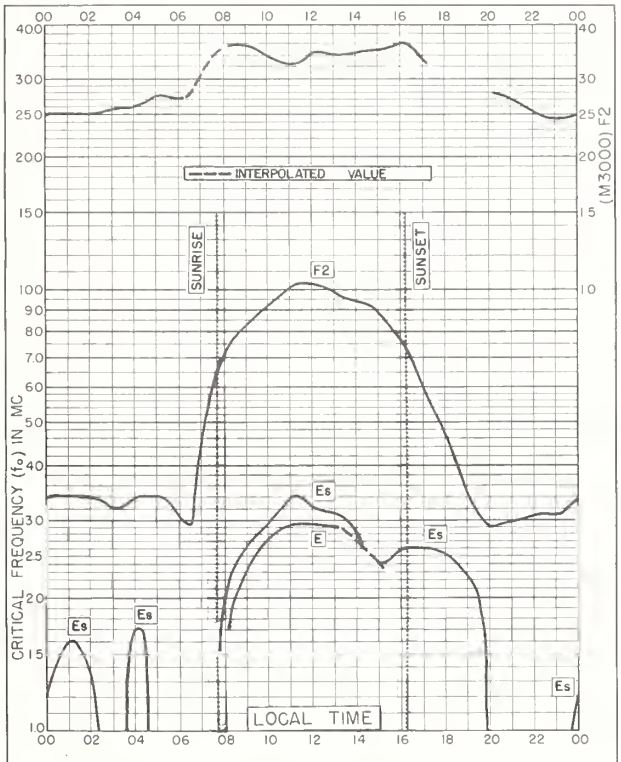


Fig. 67. FALKLAND IS.
51.7°S, 57.8°W MAY 1960

NBS 503

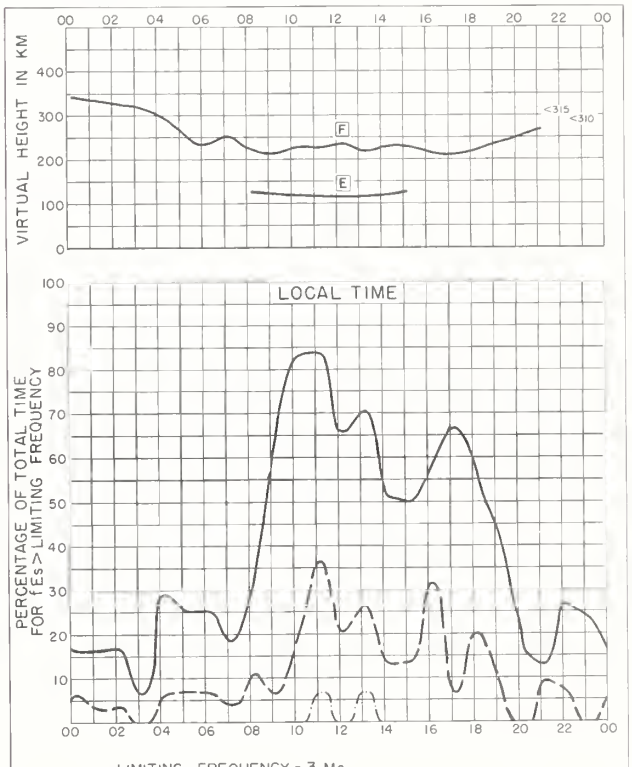


Fig. 68. FALKLAND IS. MAY 1960

NBS 490

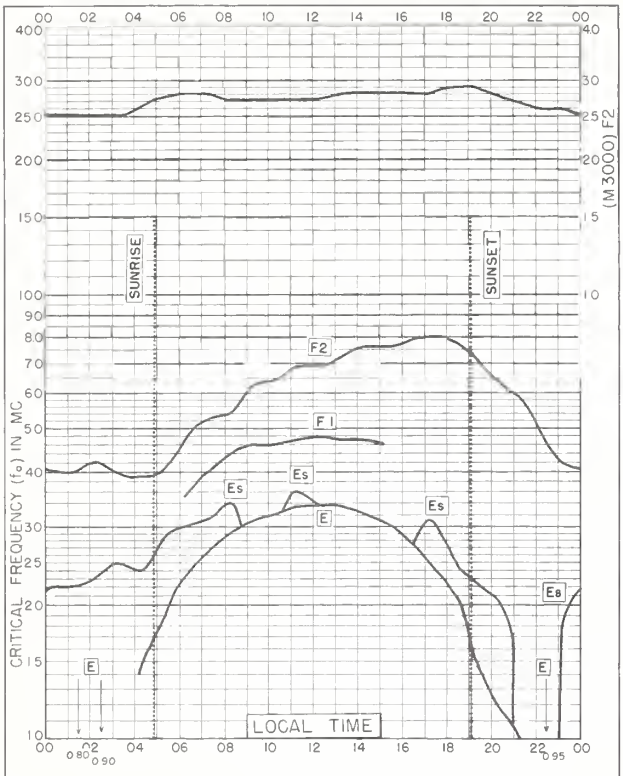


Fig. 69. UPSALA, SWEDEN
59.8°N, 17.6°E APRIL 1960

NBS 503

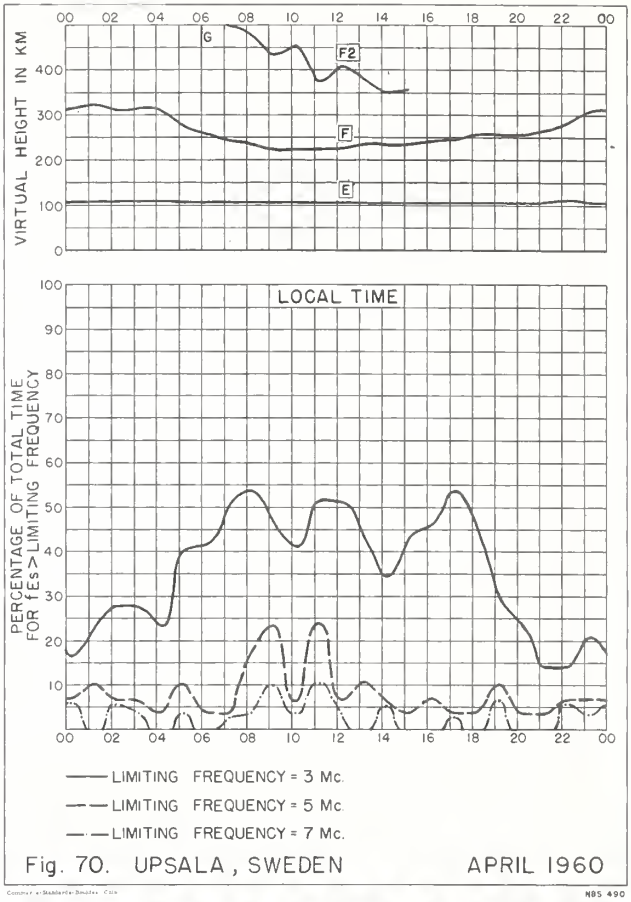


Fig. 70. UPSALA, SWEDEN APRIL 1960

NBS 490

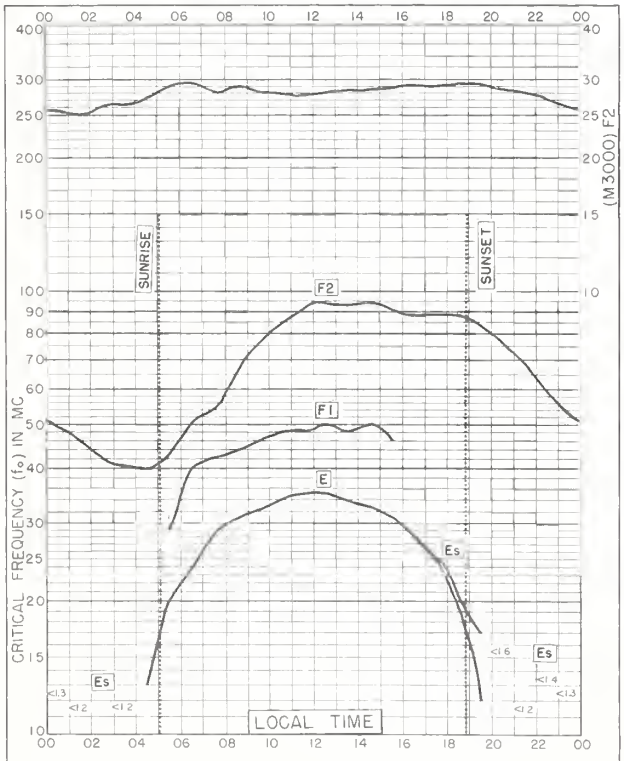


Fig. 71. MOSCOW, U.S.S.R.
55.5°N, 37.3°E APRIL 1960

NBS 503

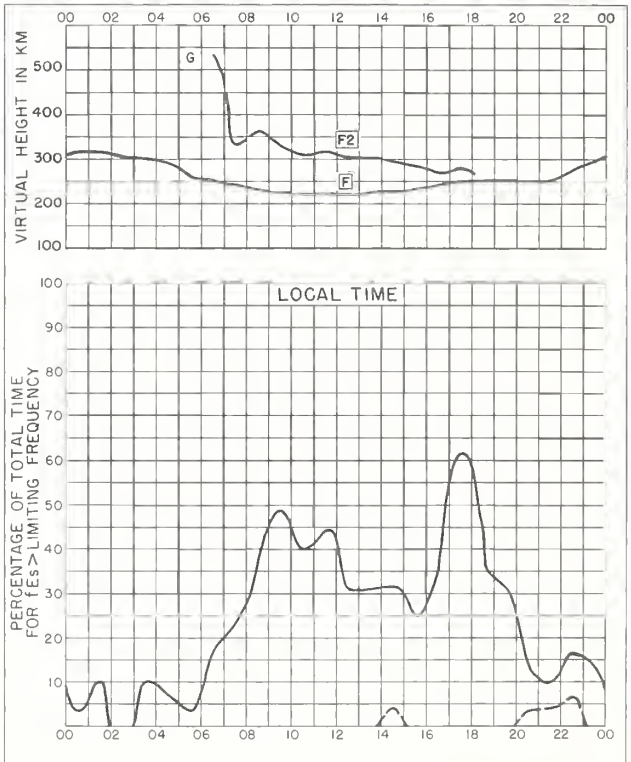


Fig. 72. MOSCOW, U.S.S.R. APRIL 1960

NBS 490

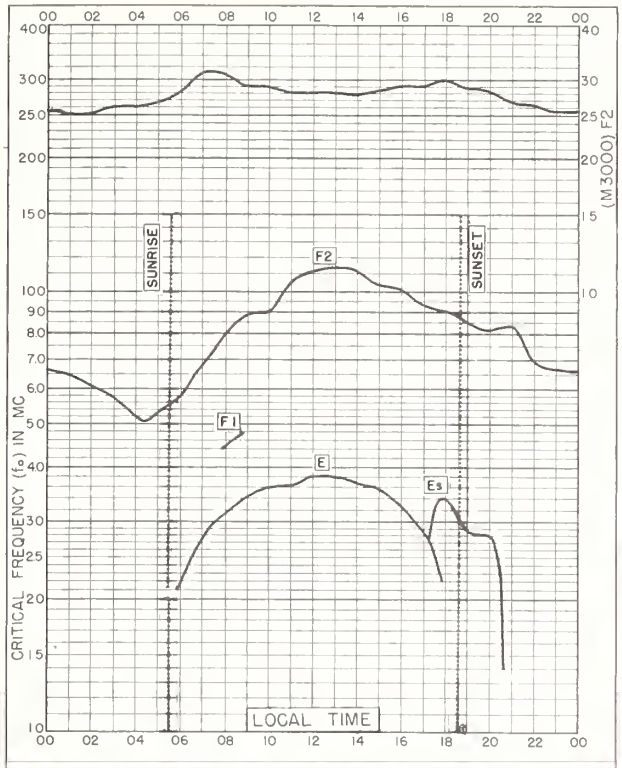


Fig. 73. ROME, ITALY
41.8°N, 12.5°E APRIL 1960

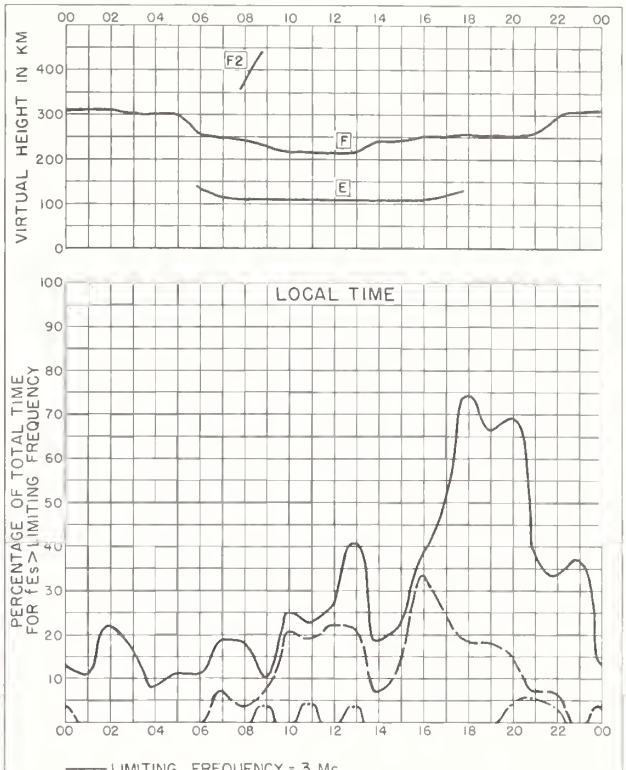


Fig. 74. ROME, ITALY APRIL 1960

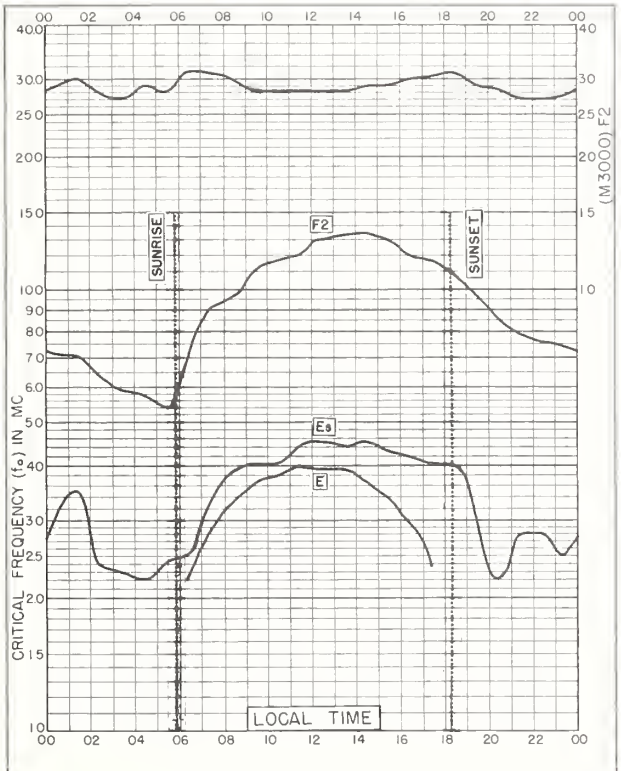


Fig. 75. EL CERILLO, MEXICO
19.3°N, 99.5°W APRIL 1960

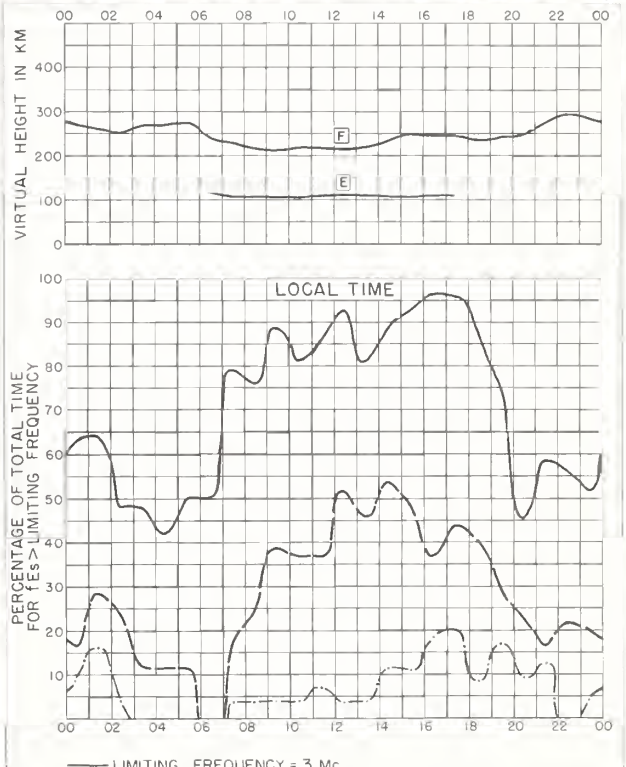


Fig. 76. EL CERILLO, MEXICO APRIL 1960

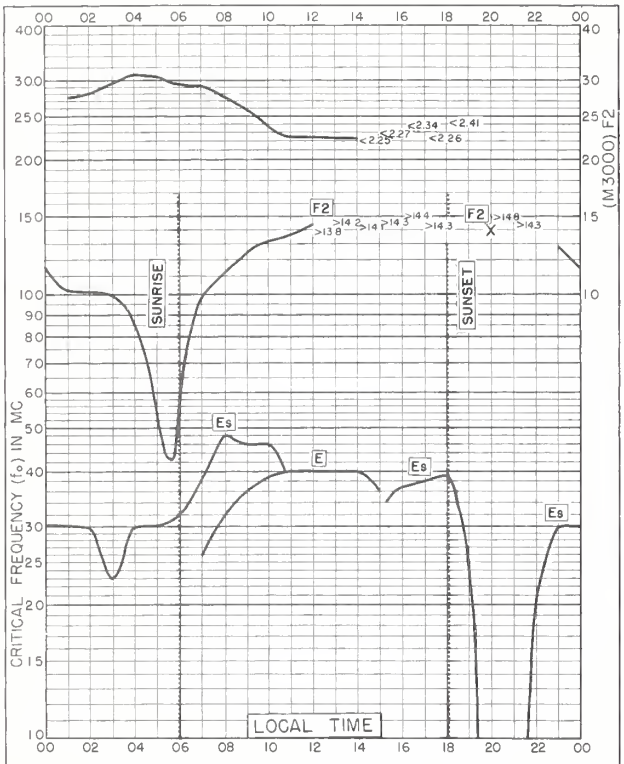


Fig. 77. BUNIA, BELGIAN CONGO
1.5°N, 30.2°E APRIL 1960

NBS 503

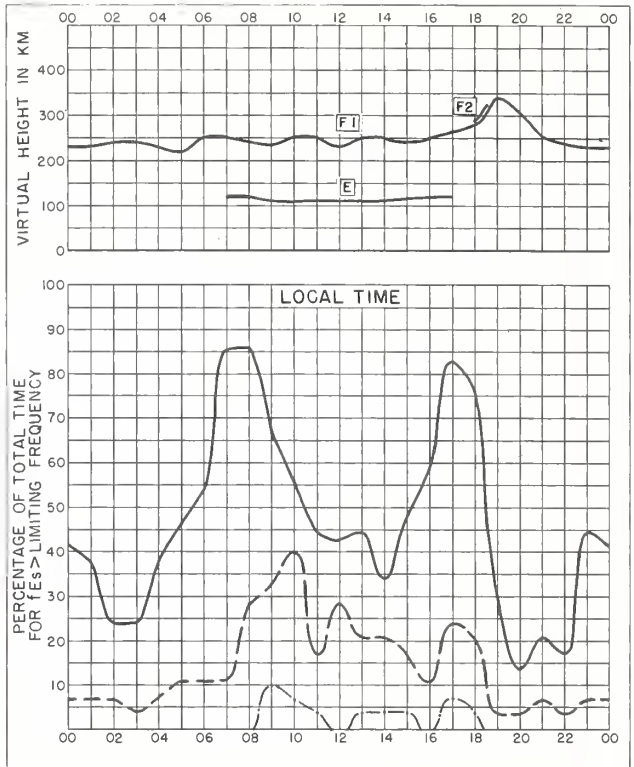


Fig. 78. BUNIA, BELGIAN CONGO APRIL 1960

NBS 490

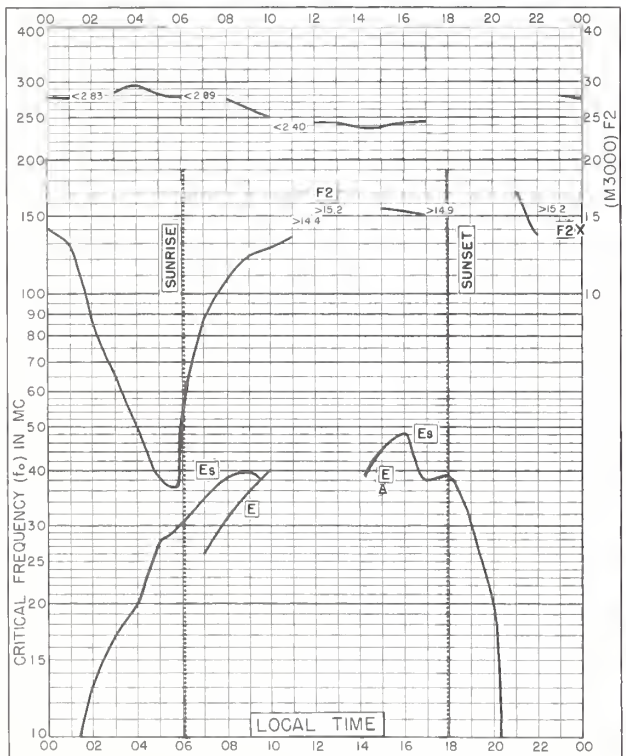


Fig. 79. LEOPOLDVILLE, BELGIAN CONGO
4.4°S, 15.2°E APRIL 1960

NBS 503

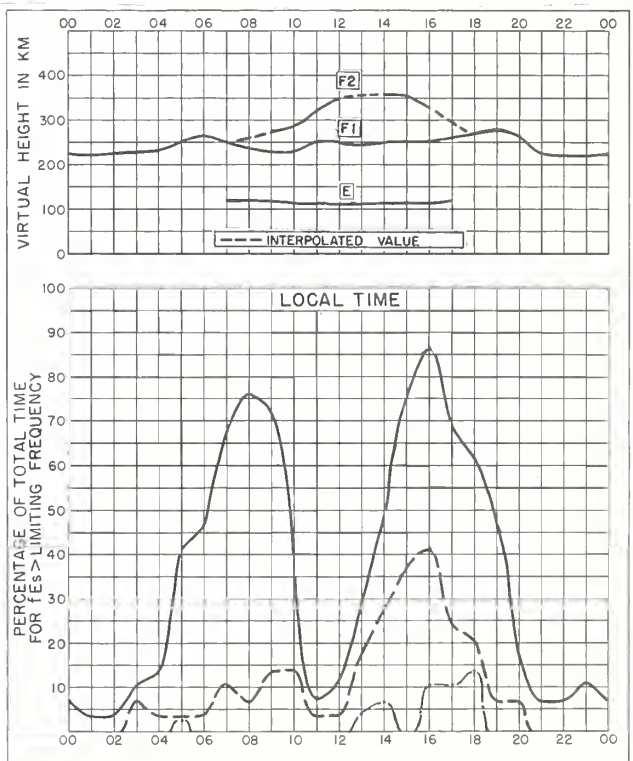


Fig. 80. LEOPOLDVILLE, BELGIAN CONGO APRIL 1960

NBS 490

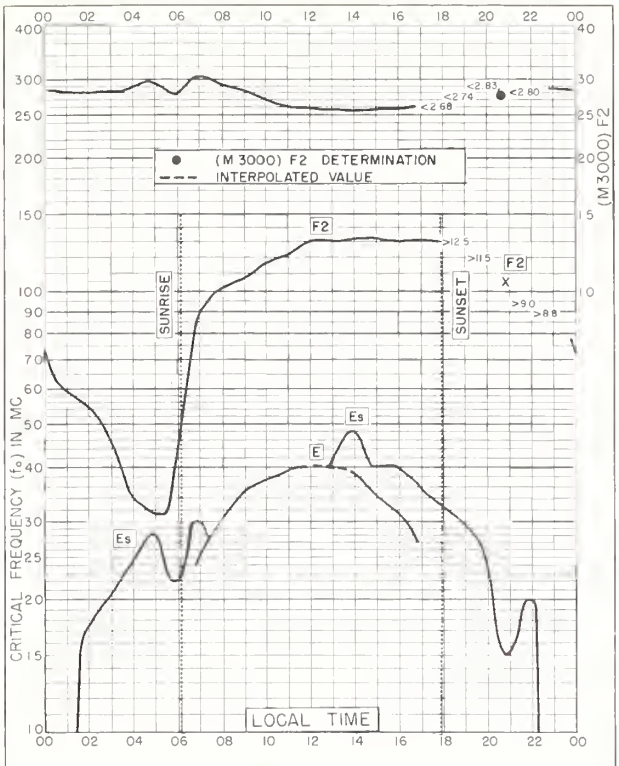
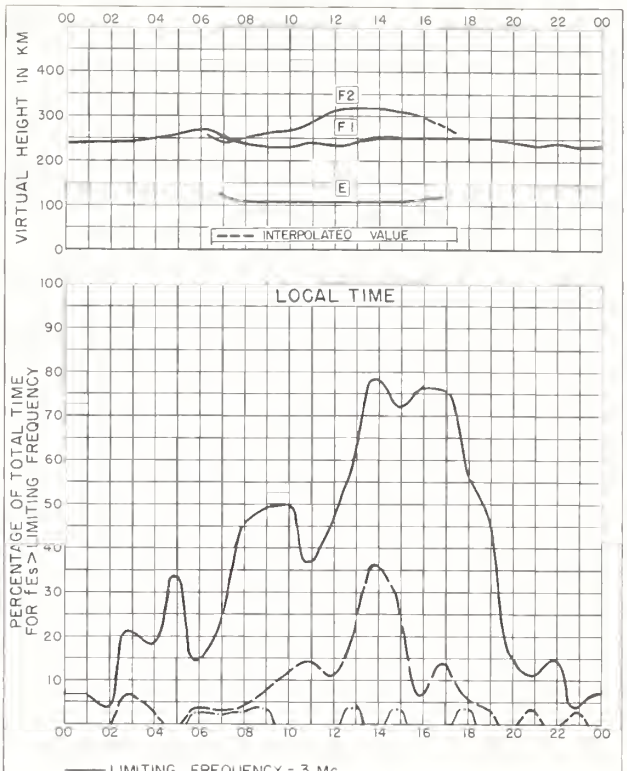


Fig. 81. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E APRIL 1960



APRIL 1960

Fig. 82. ELISABETHVILLE, BELGIAN CONGO

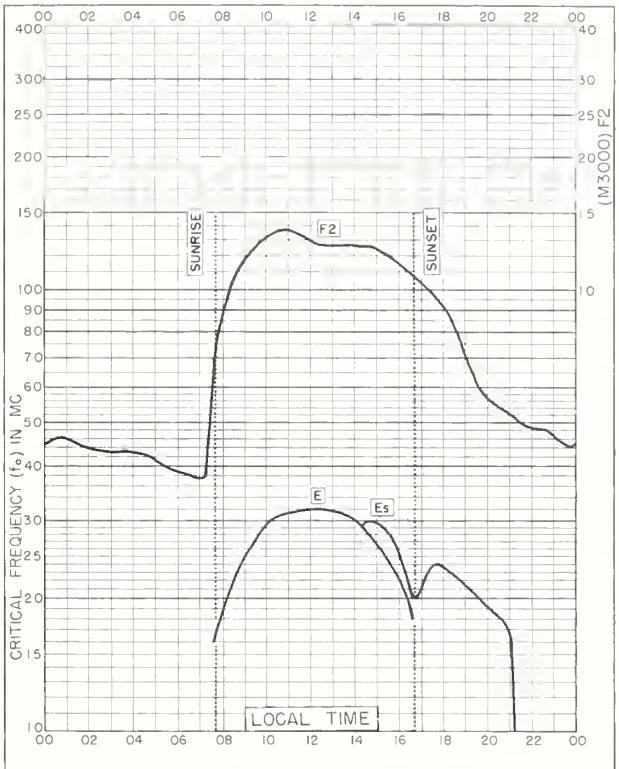
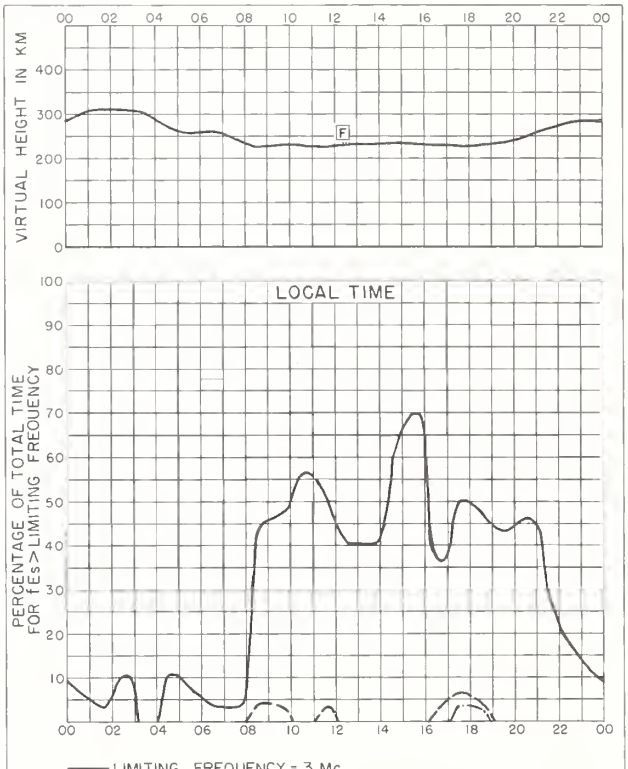


Fig. 83. GENOA (MONTE CAPELLINO), ITALY
44.6°N, 9.0°E JANUARY 1960



JANUARY 1960

Fig. 84. GENOA (MONTE CAPELLINO), ITALY

Fig. 85. ROME, ITALY
41.8°N, 12.5°E DECEMBER 1959

NBS 503

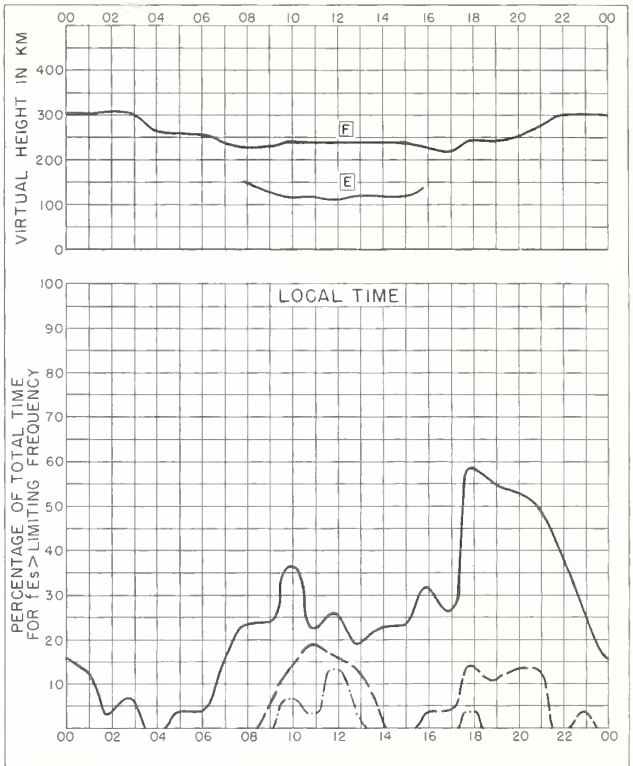


Fig. 86. ROME, ITALY DECEMBER 1959

NBS 490

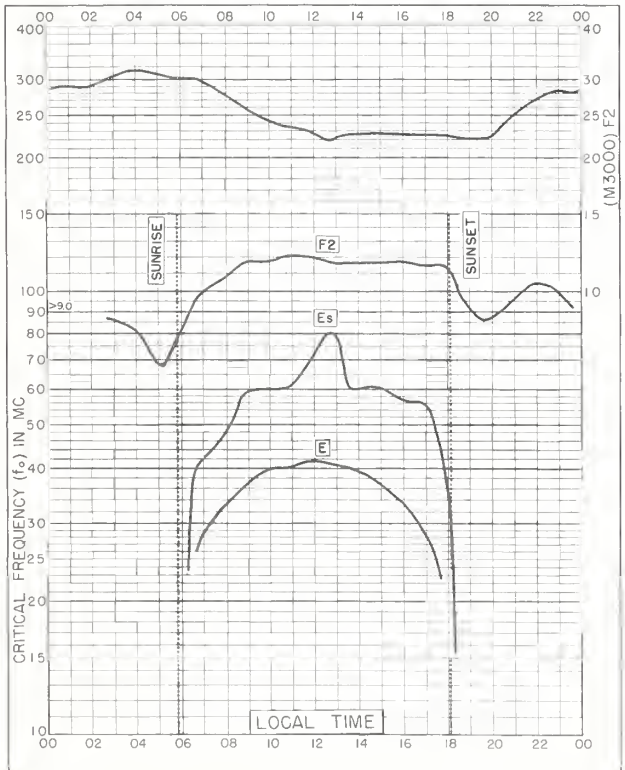


Fig. 87. NATAL, BRAZIL
5.3°S, 35.1°W DECEMBER 1959

NBS 503

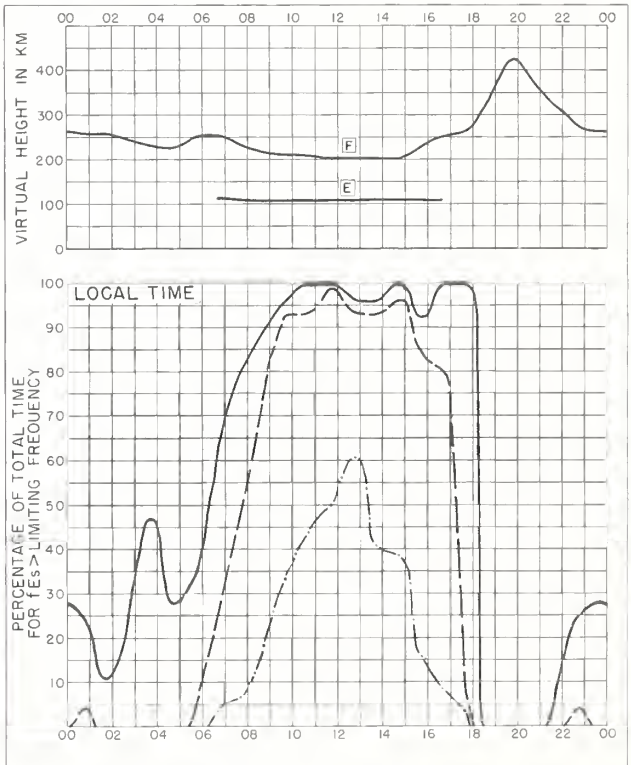


Fig. 88. NATAL, BRAZIL DECEMBER 1959

NBS 490

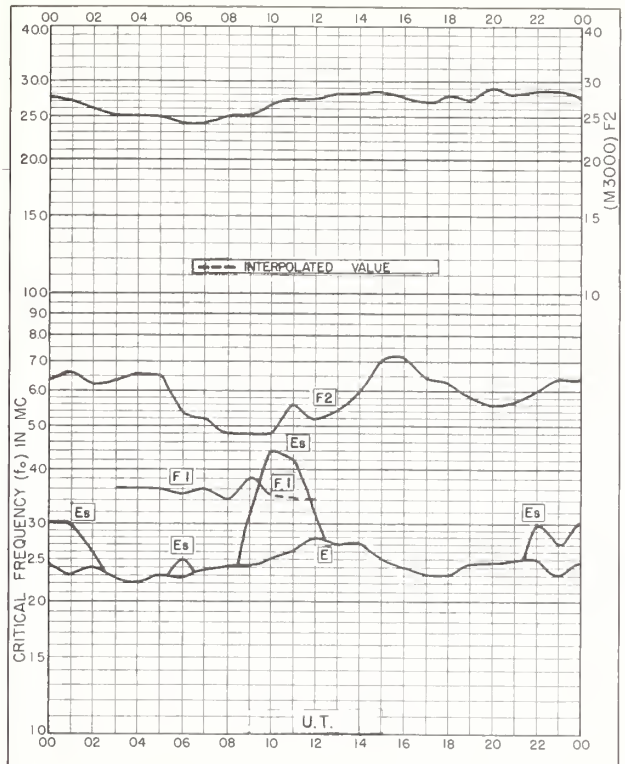


Fig. 89. POLE, STATION 90.0°S OCTOBER 1959

NBS 503

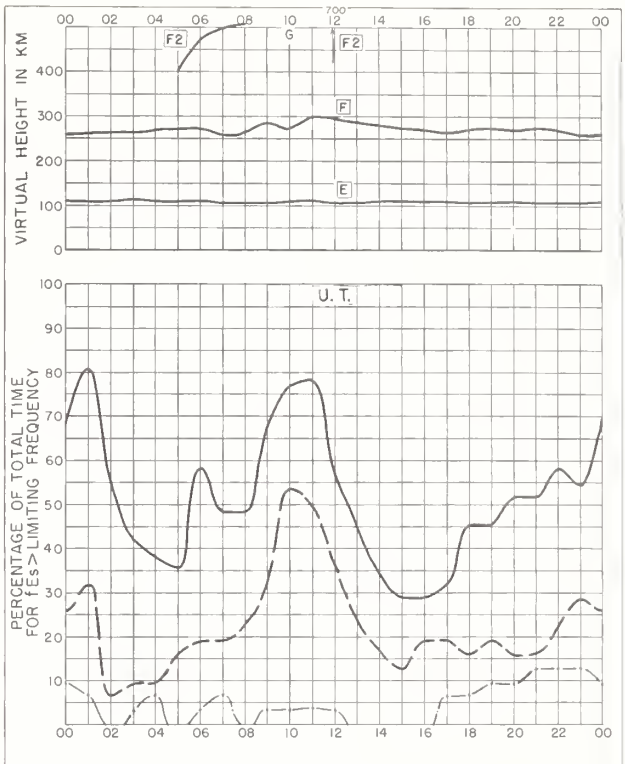


Fig. 90. POLE STATION OCTOBER 1959

NBS 490

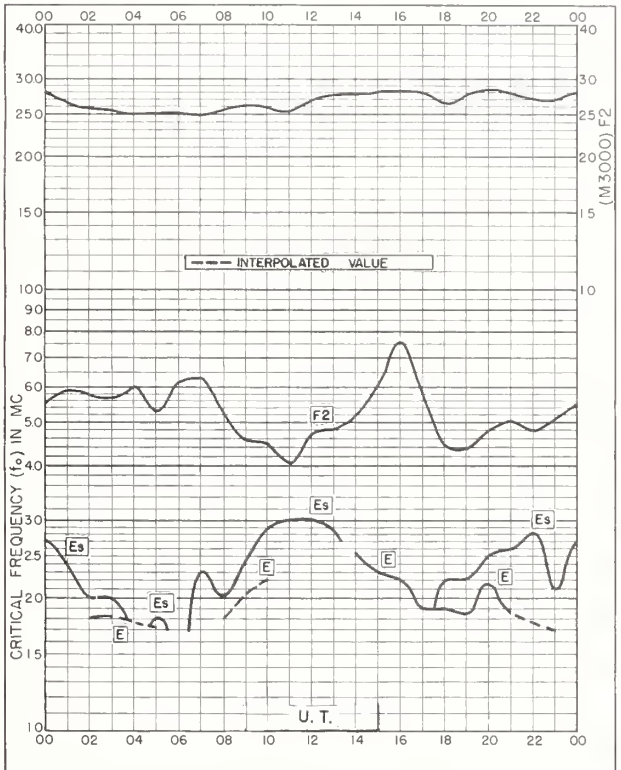


Fig. 91. POLE STATION 90.0°S SEPTEMBER 1959

NBS 503

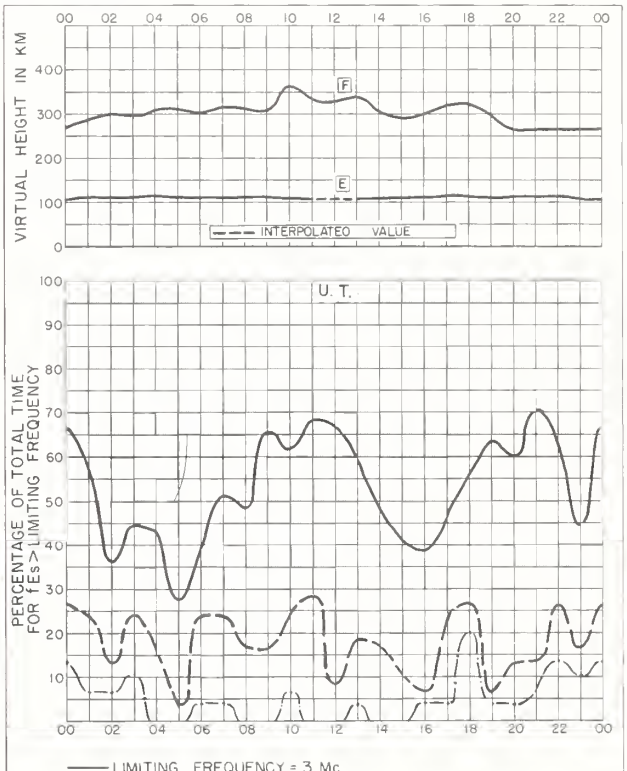


Fig. 92. POLE STATION SEPTEMBER 1959

NBS 490

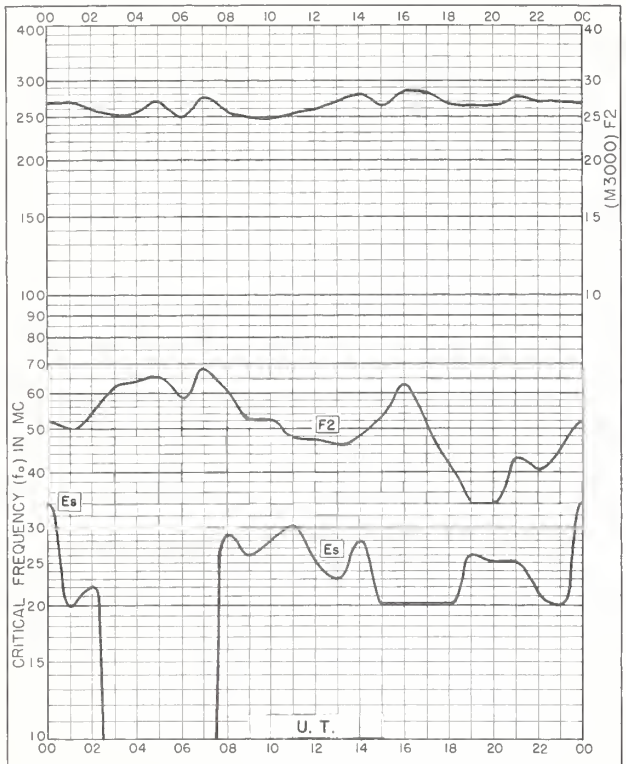


Fig. 93. POLE STATION
90.0°S AUGUST 1959

NBS 503

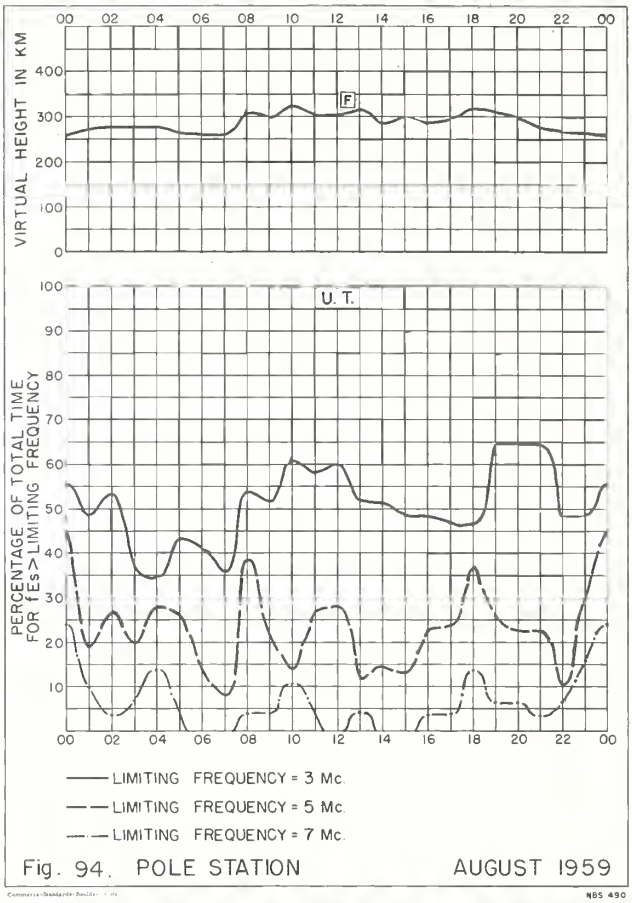


Fig. 94. POLE STATION AUGUST 1959

NBS 490

Fig. 95. POLE STATION
90.0°S JULY 1959

NBS 503

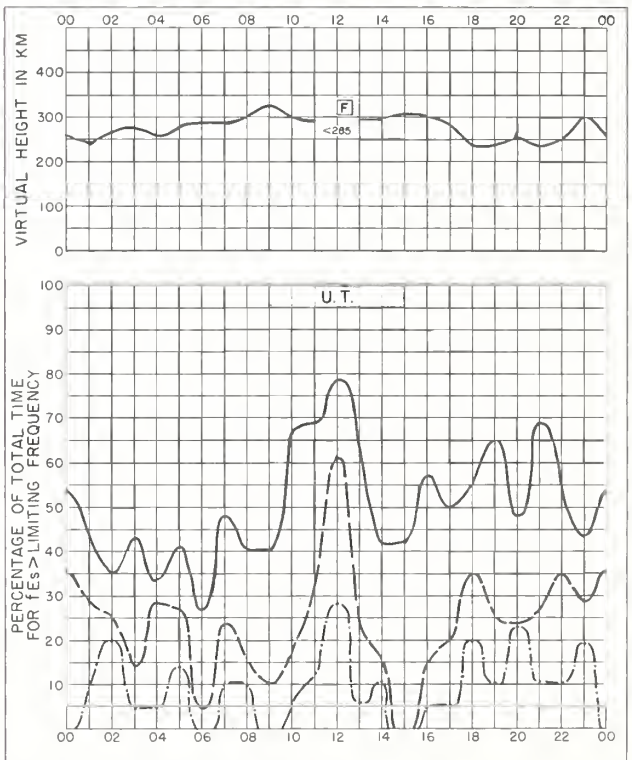


Fig. 96. POLE STATION JULY 1959

NBS 490

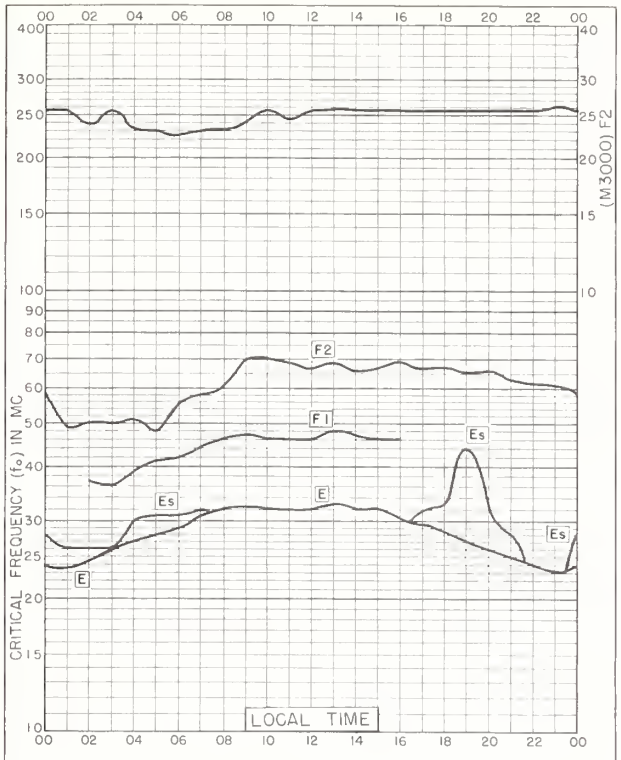


Fig. 97. SVALBARD, NORWAY
78.2°N, 15.7°E MAY 1959

NBS 503

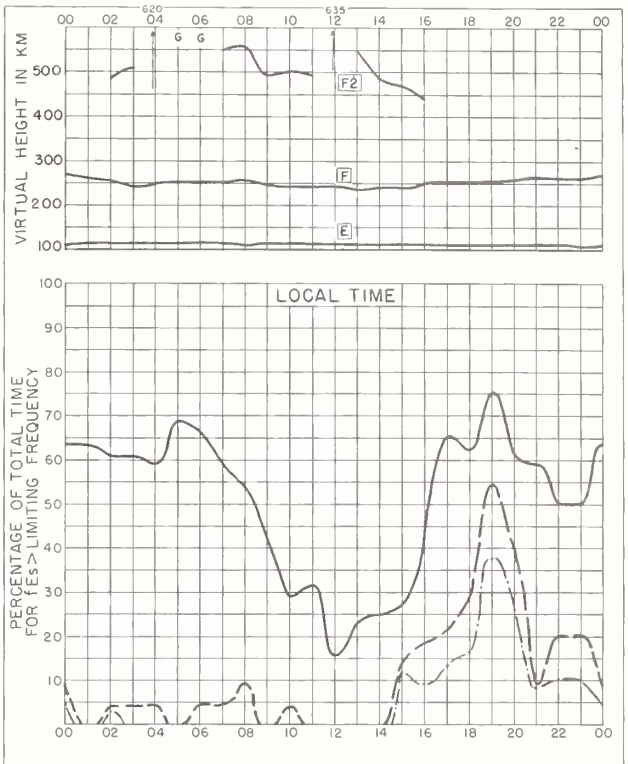


Fig. 98. SVALBARD, NORWAY MAY 1959

NBS 490

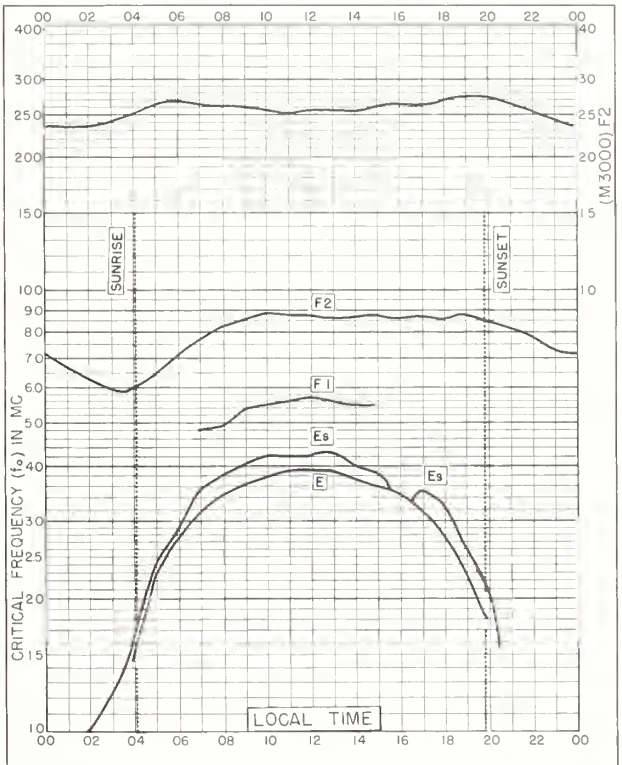


Fig. 99. JULIUSRUH/RÜGEN, GERMANY
54.6°N, 13.4°E MAY 1959

NBS 503

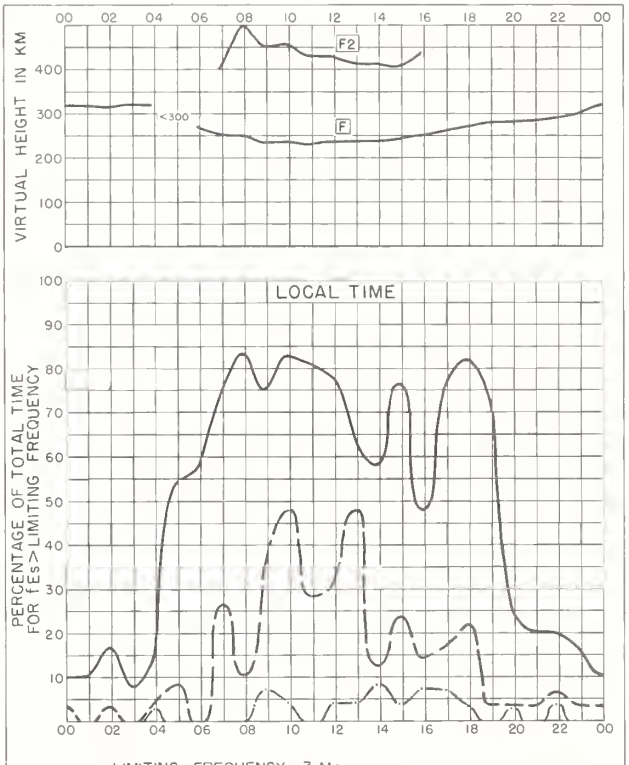


Fig. 100. JULIUSRUH/RÜGEN, GERMANY MAY 1959

NBS 490

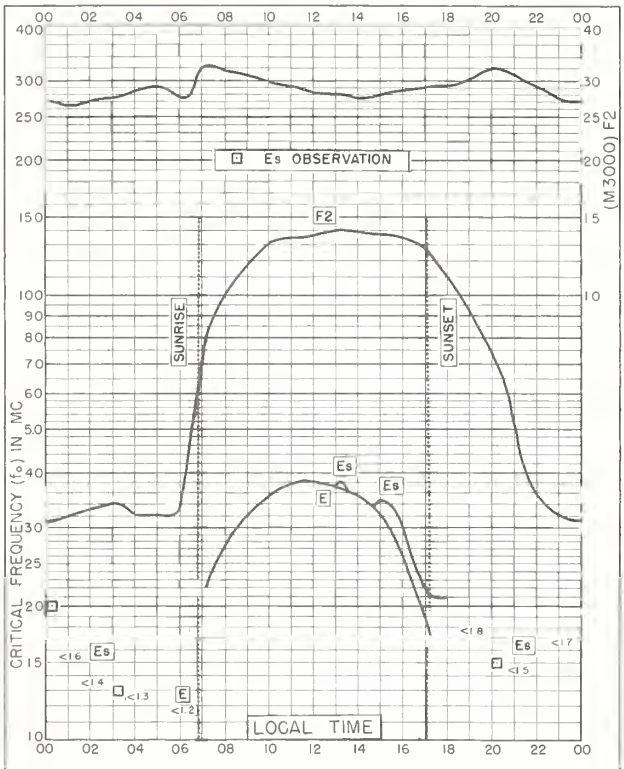


Fig. 101. CAPETOWN, UNION OF S. AFRICA
34.1°S, 18.3°E MAY 1959

NBS 503

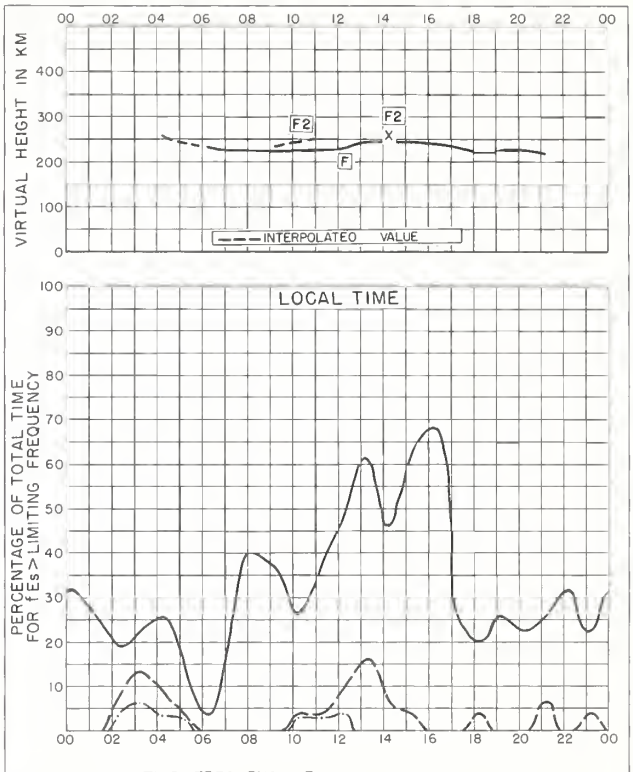


Fig. 102. CAPETOWN, UNION OF S. AFRICA MAY 1959

NBS 490

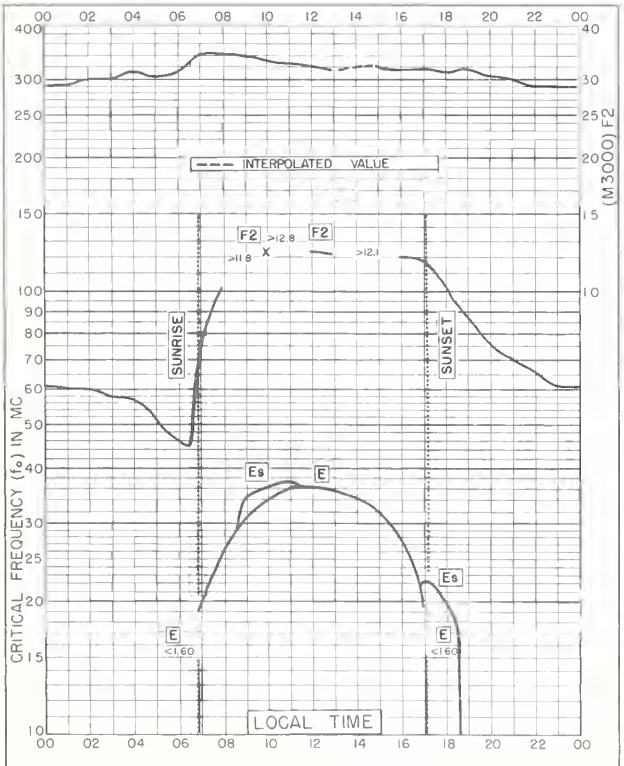


Fig. 103. CANBERRA, AUSTRALIA
35.3°S, 149.0°E MAY 1959

NBS 503

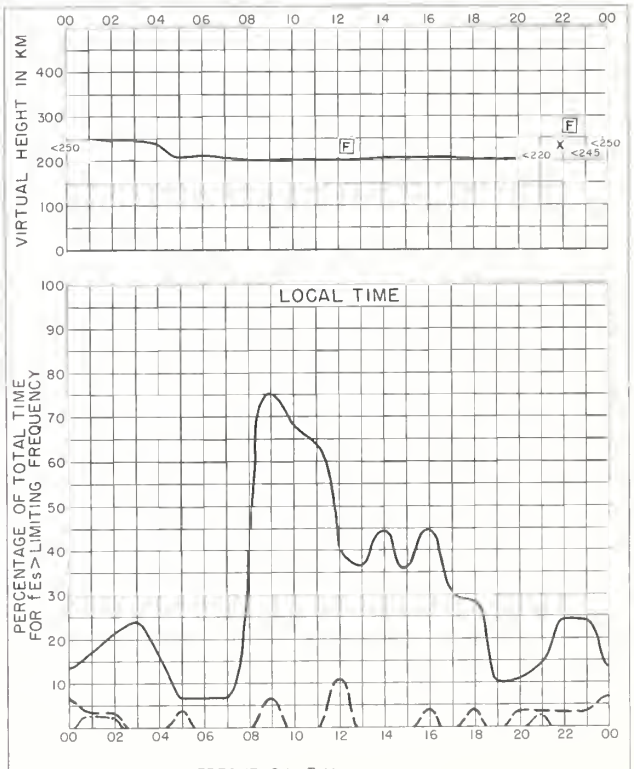


Fig. 104. CANBERRA, AUSTRALIA MAY 1959

NBS 490

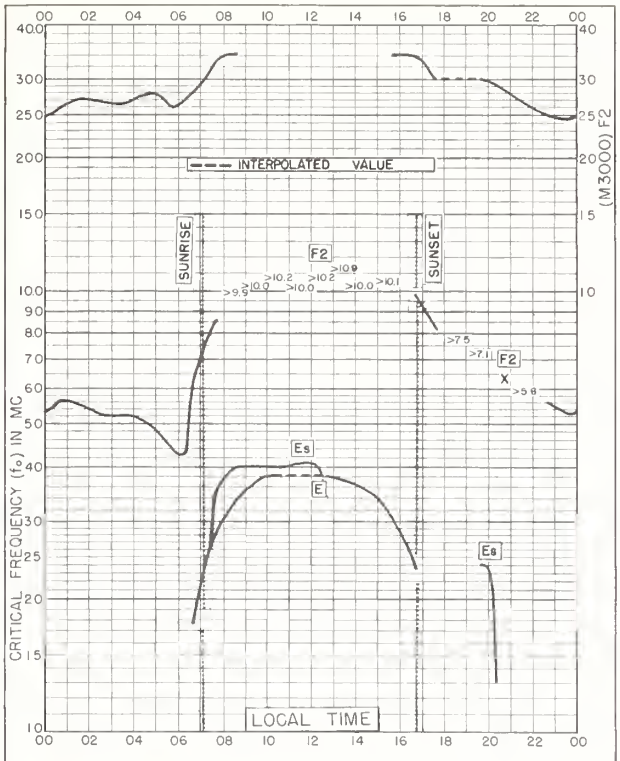


Fig. 105. TRELEW, ARGENTINA
43.2°S, 65.3°W MAY 1959

NBS 503

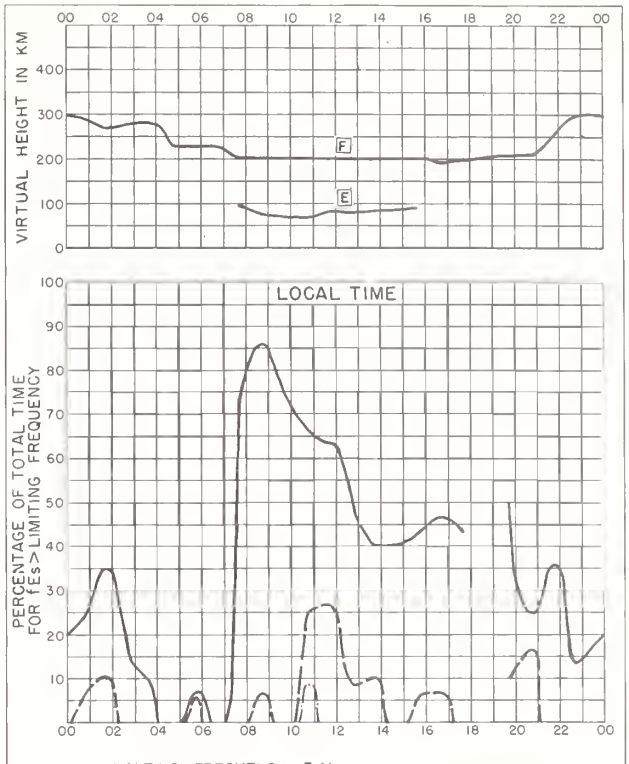


Fig. 106. TRELEW, ARGENTINA MAY 1959

NBS 490

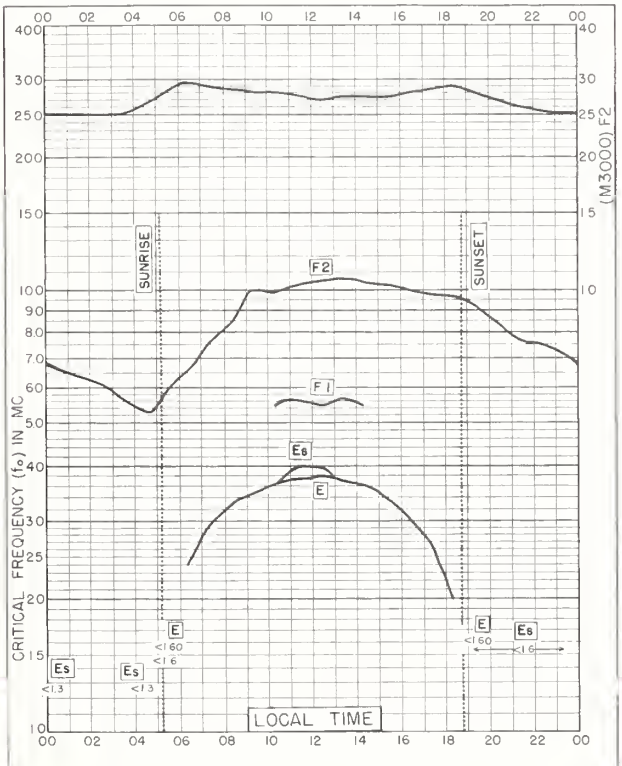


Fig. 107. DOURBES, BELGIUM
50.1°N, 4.6°E APRIL 1959

NBS 503

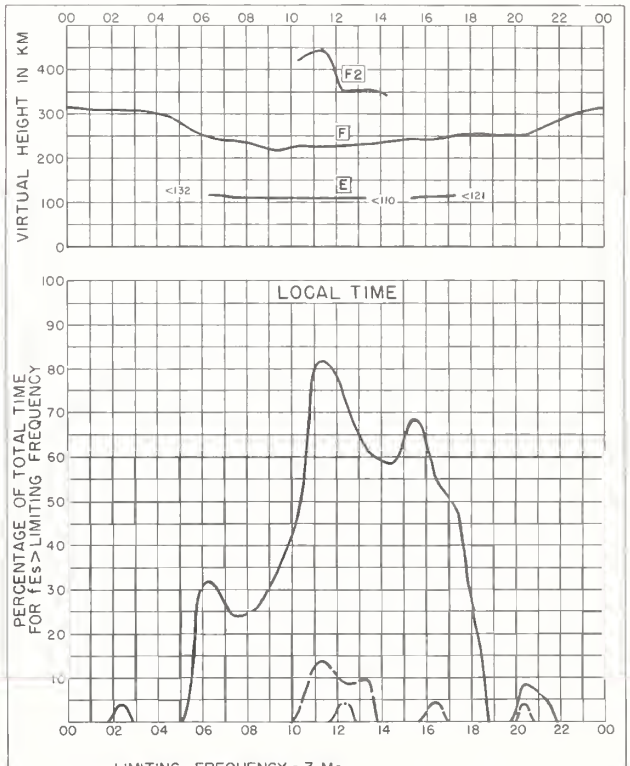


Fig. 108. DOURBES, BELGIUM APRIL 1959

NBS 490

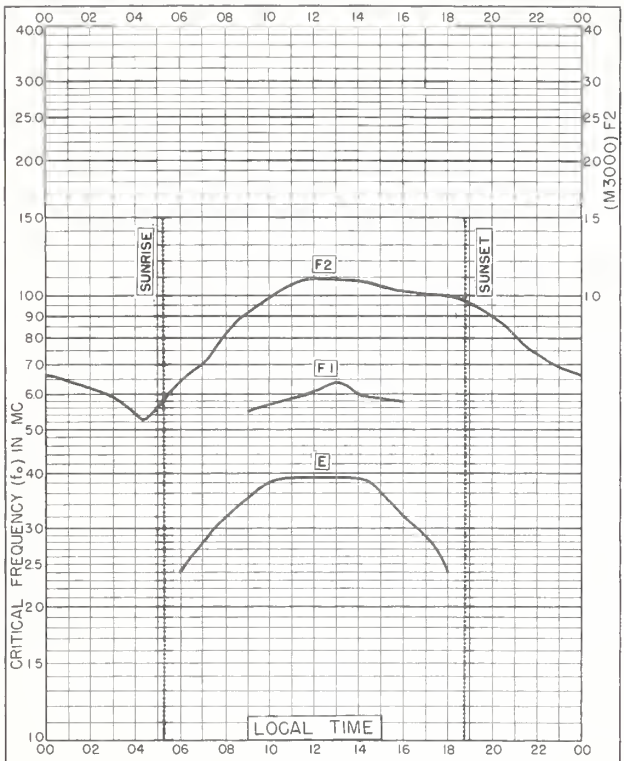
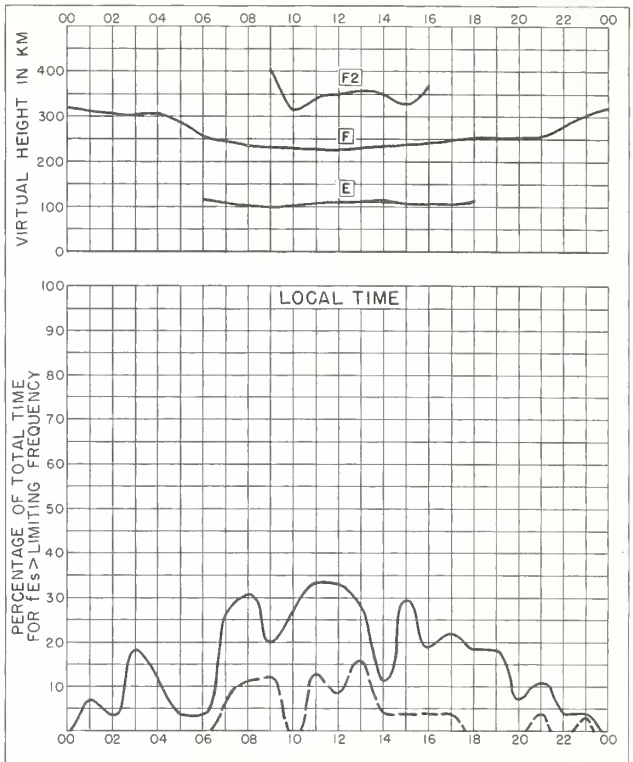


Fig. 109. PRUHONICE, CZECHOSLOVAKIA
50.0°N, 14.6°E APRIL 1959

NBS 503



APRIL 1959

Fig. 110. PRUHONICE, CZECHOSLOVAKIA

NBS 490

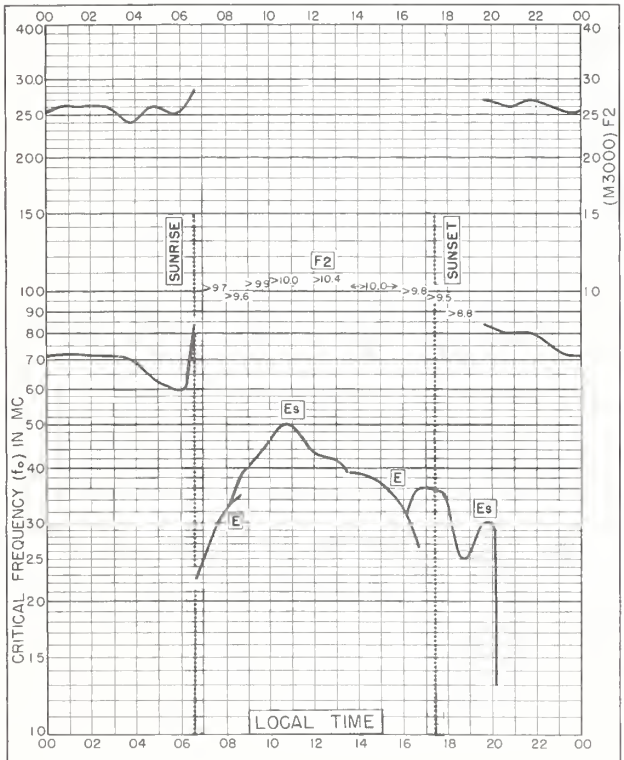


Fig. 111. TRELEW, ARGENTINA
43.2°S, 65.3°W APRIL 1959

NBS 503

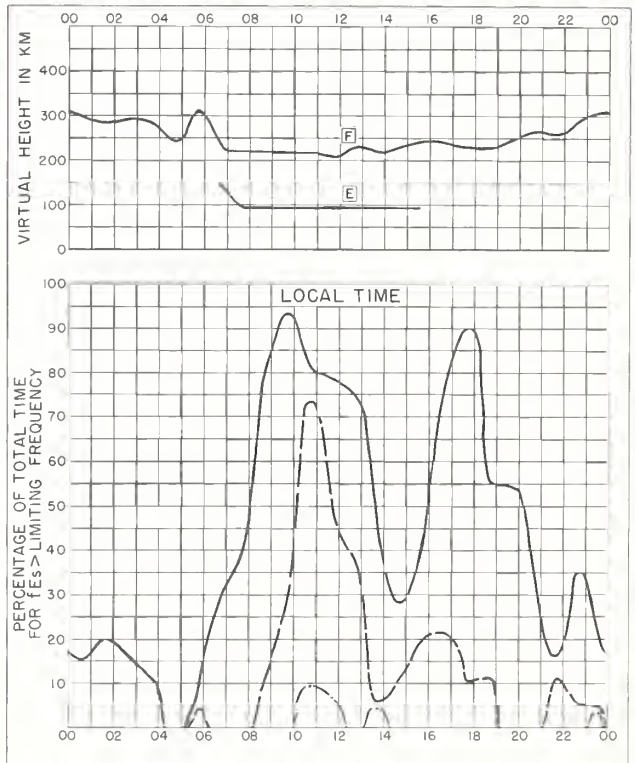


Fig. 112. TRELEW, ARGENTINA APRIL 1959

NBS 490

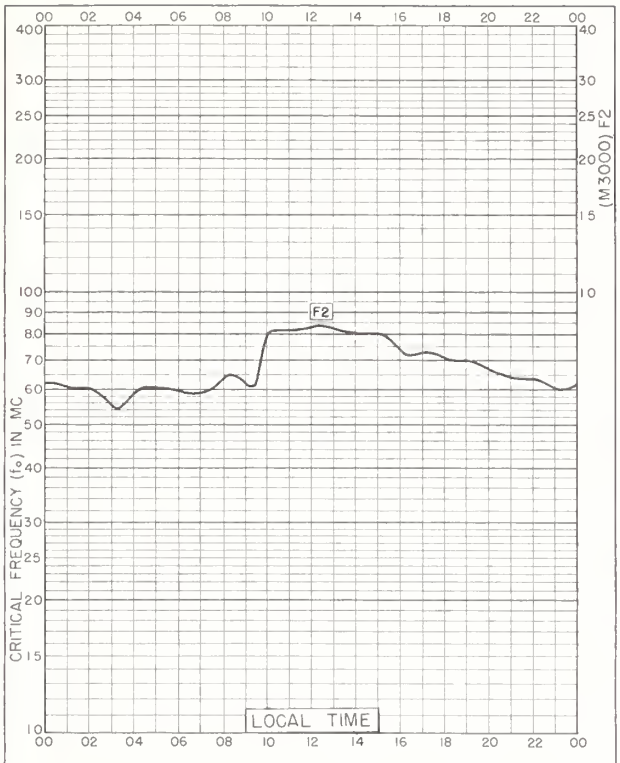


Fig. 113. EUREKA, CANADA
80.0°N, 85.9°W NOVEMBER 1958

NBS 503

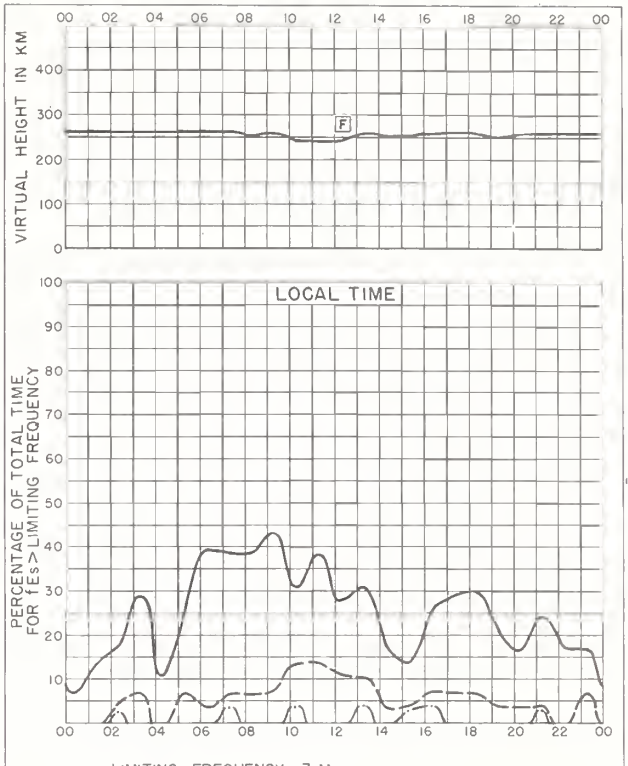


Fig. 114. EUREKA, CANADA NOVEMBER 1958

NBS 490

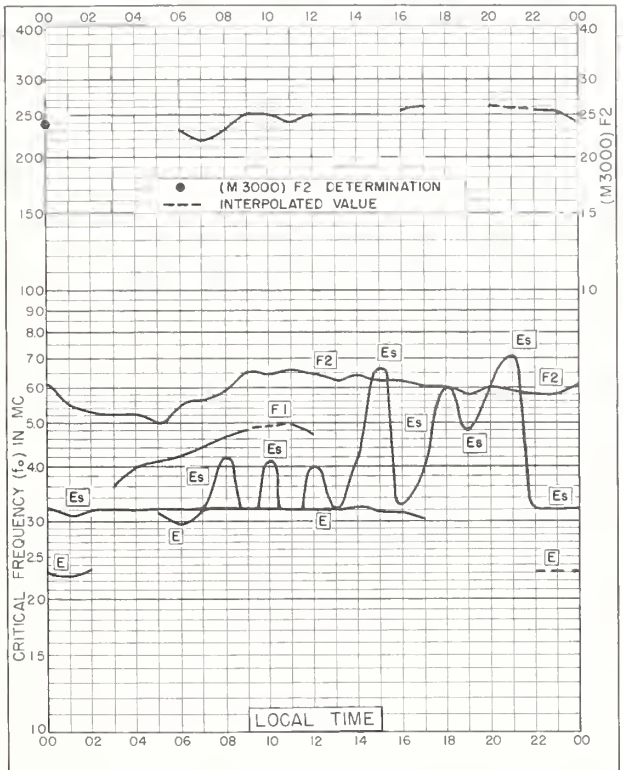


Fig. 115. SVALBARD, NORWAY
78.2°N, 15.7°E AUGUST 1958

NBS 503

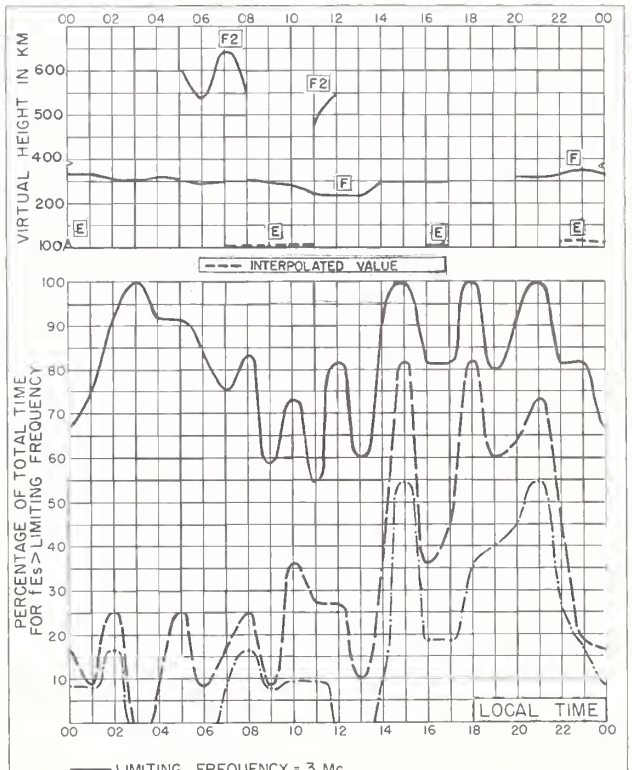


Fig. 116. SVALBARD, NORWAY AUGUST 1958

NBS 490

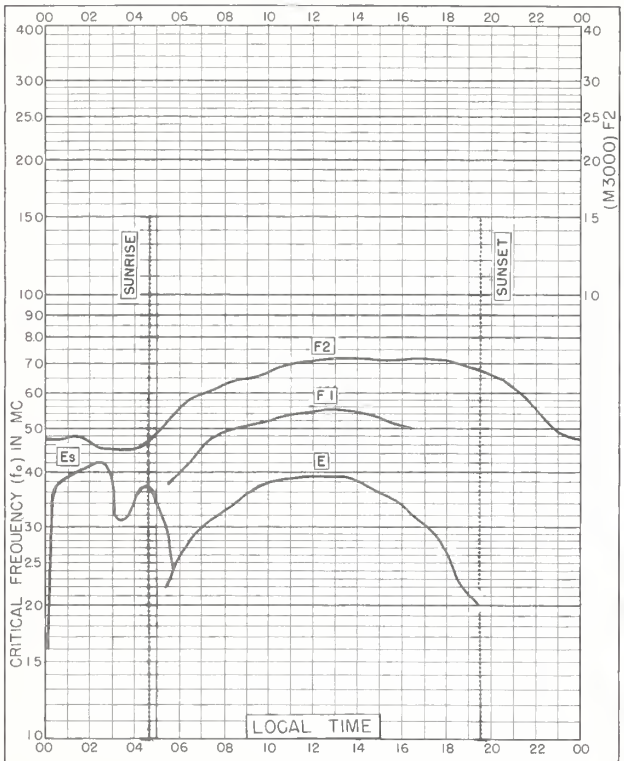


Fig. 117. MEANOOK, CANADA
54.6°N, 113.3°W AUGUST 1958

NBS 503

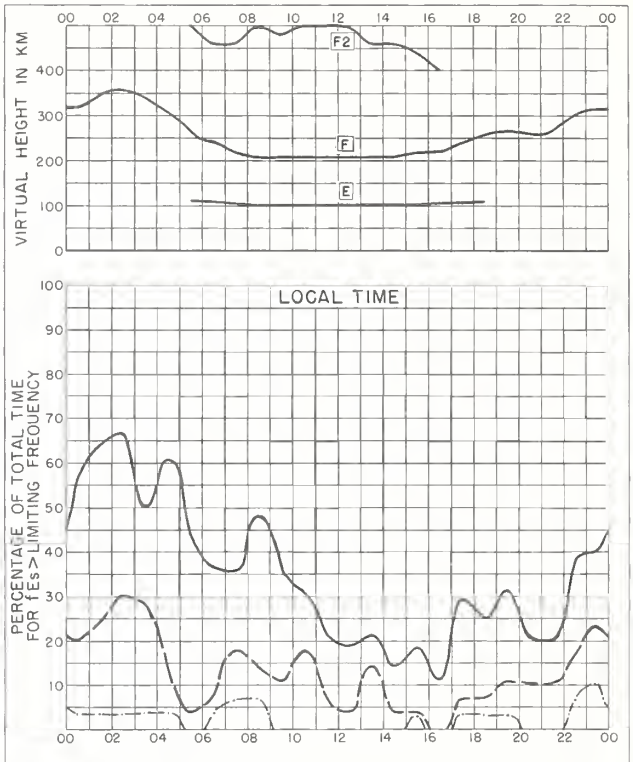


Fig. 118. MEANOOK, CANADA AUGUST 1958

NBS 490

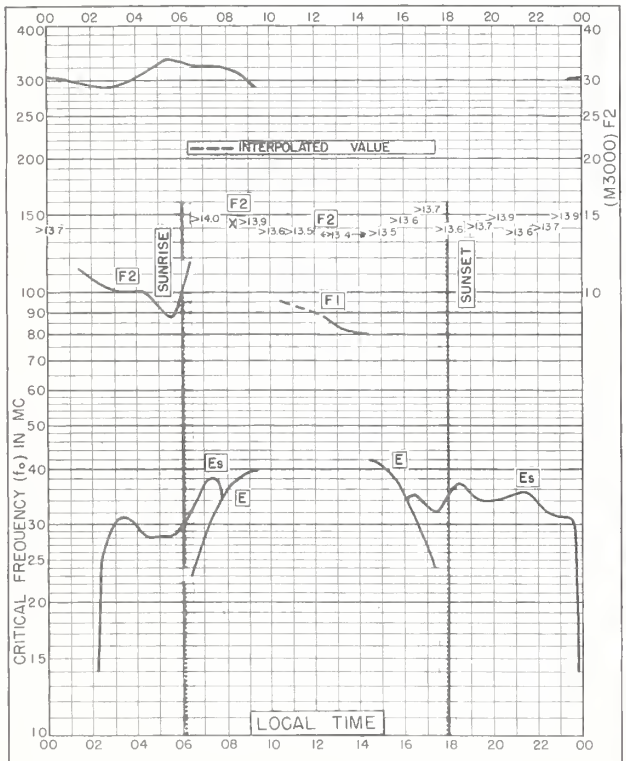


Fig. 119. HOLLANDIA, NETHERLANDS NEW GUINEA
2.5°S, 140.8°E APRIL 1958

NBS 503

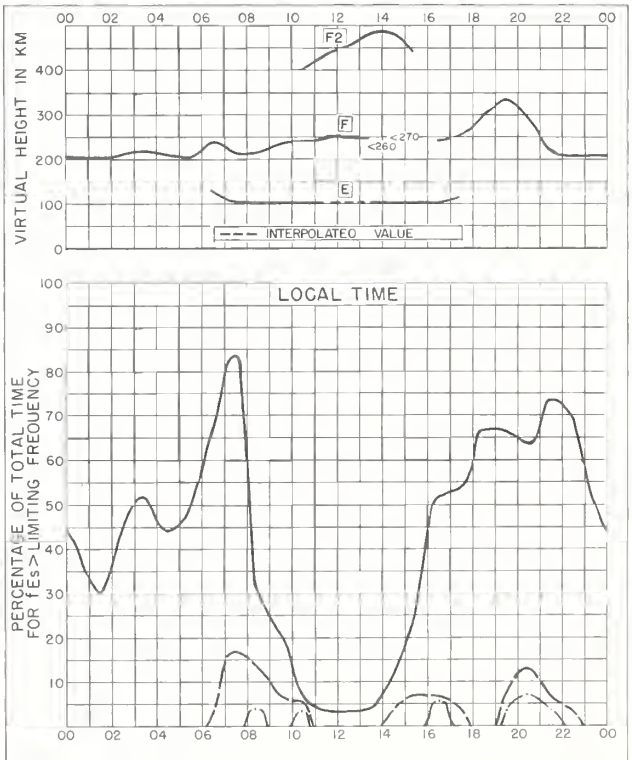


Fig. 120. HOLLANDIA, NETHERLANDS NEW GUINEA APRIL 1958

NBS 490

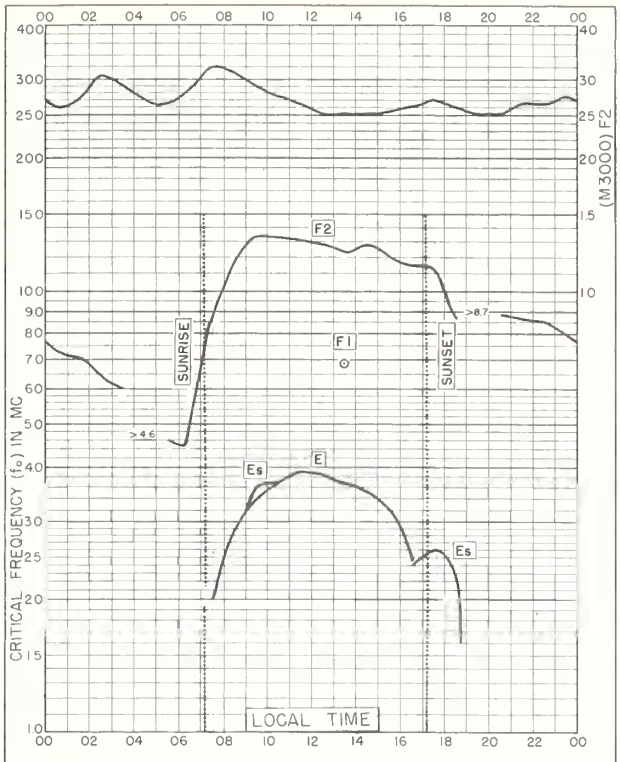
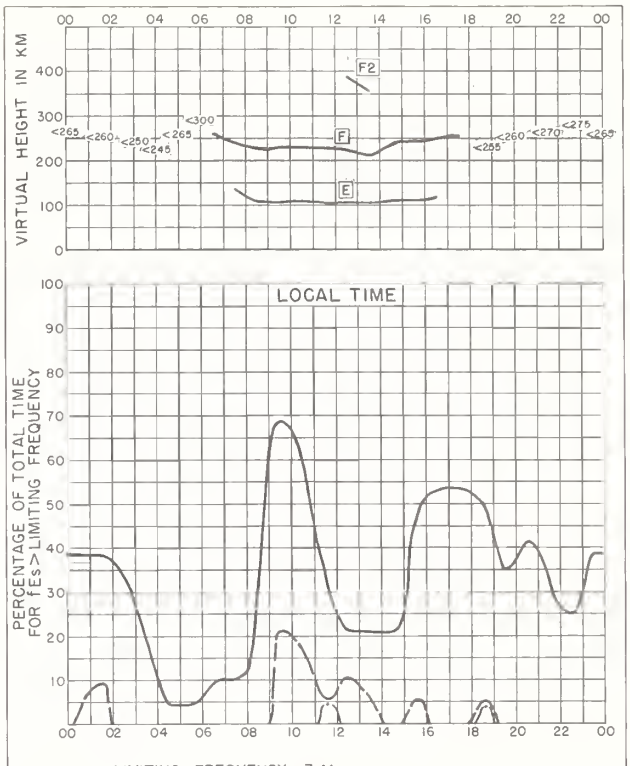


Fig. 121. CASABLANCA, MOROCCO
33.6°N, 7.6°W JANUARY 1958



JANUARY 1958

Fig. 122. CASABLANCA, MOROCCO

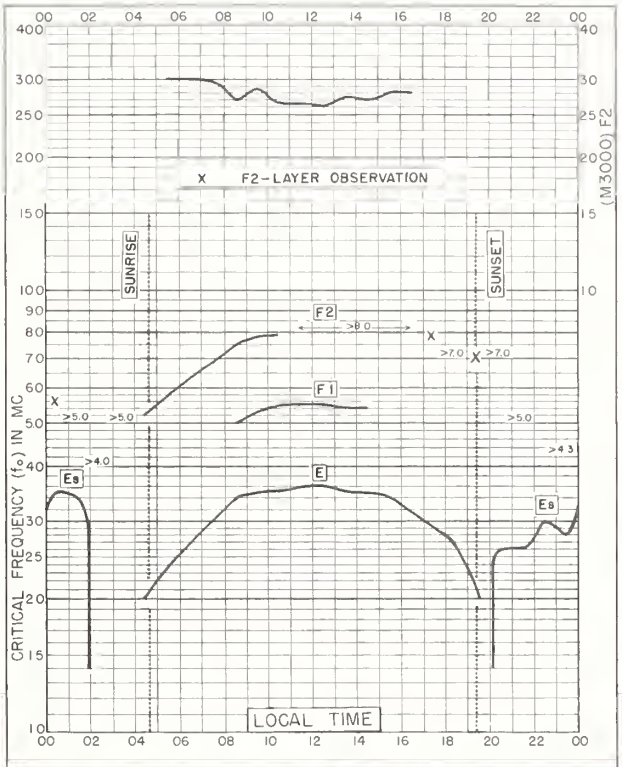


Fig. 123. LULEA, SWEDEN
65.6°N, 22.1°E APRIL 1957

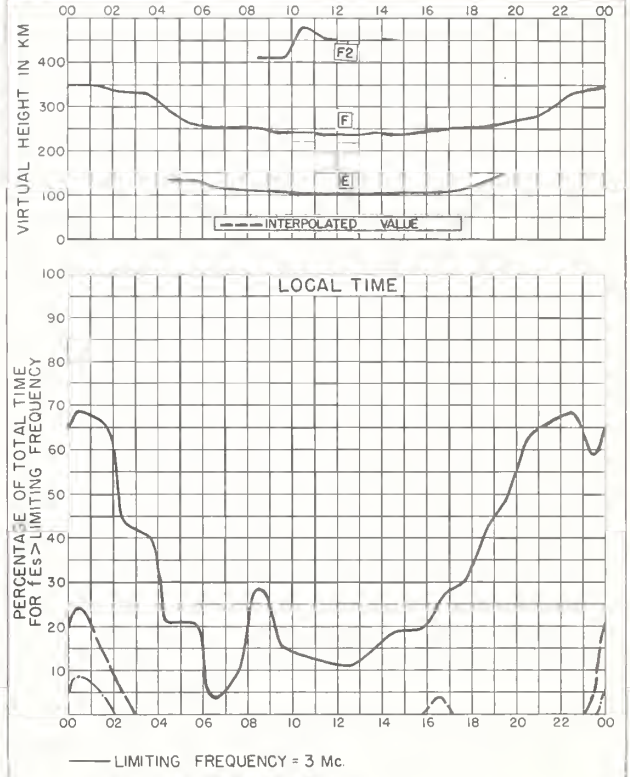


Fig. 124. LULEA, SWEDEN APRIL 1957

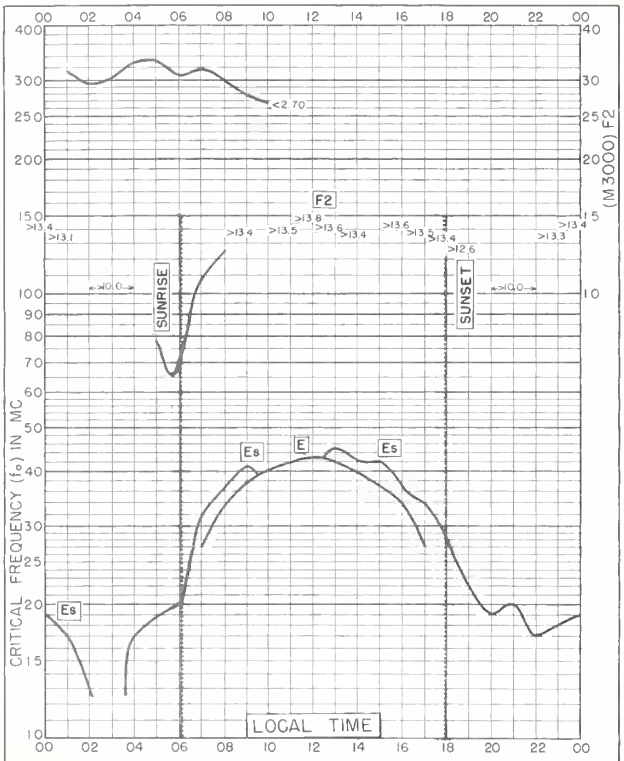


Fig. 125. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E APRIL 1957

NBS 503

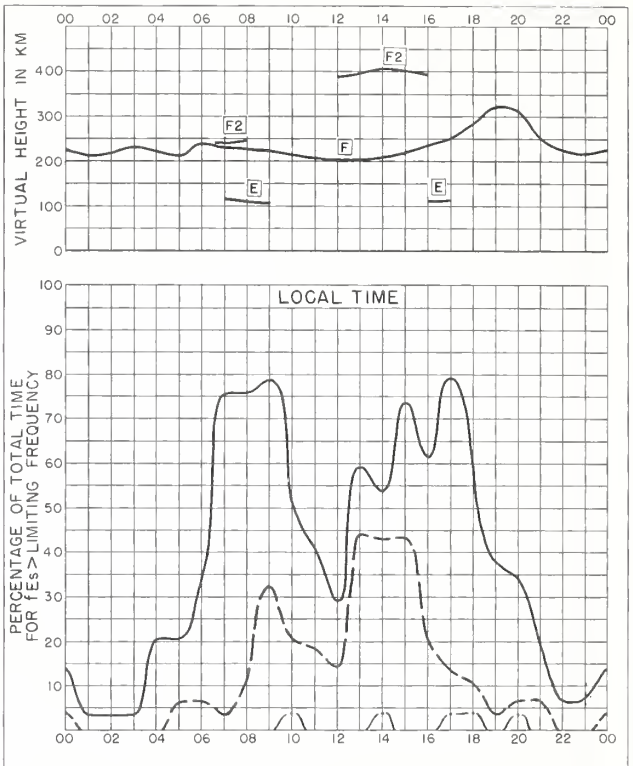


Fig. 126. LWIRO, BELGIAN CONGO APRIL 1957

NBS 490

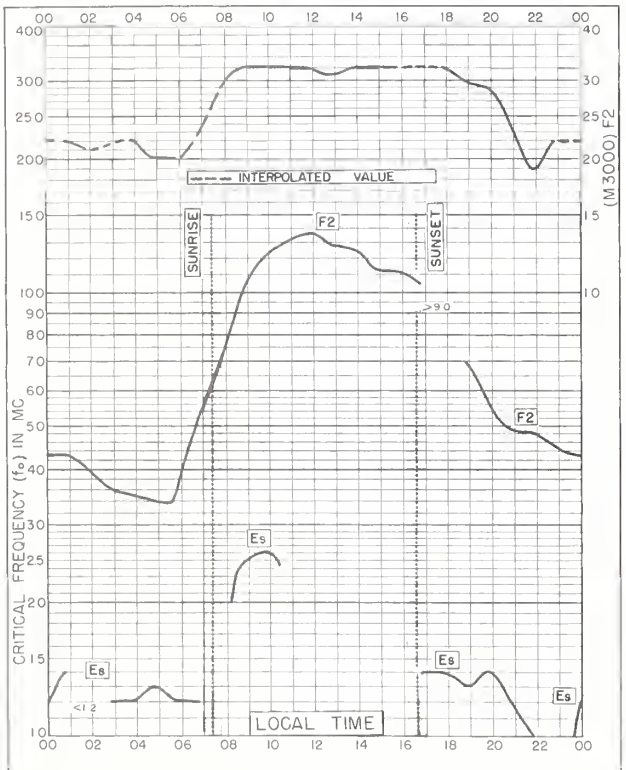


Fig. 127. PORT LOCKROY
64.8°S, 63.5°W APRIL 1957

NBS 503

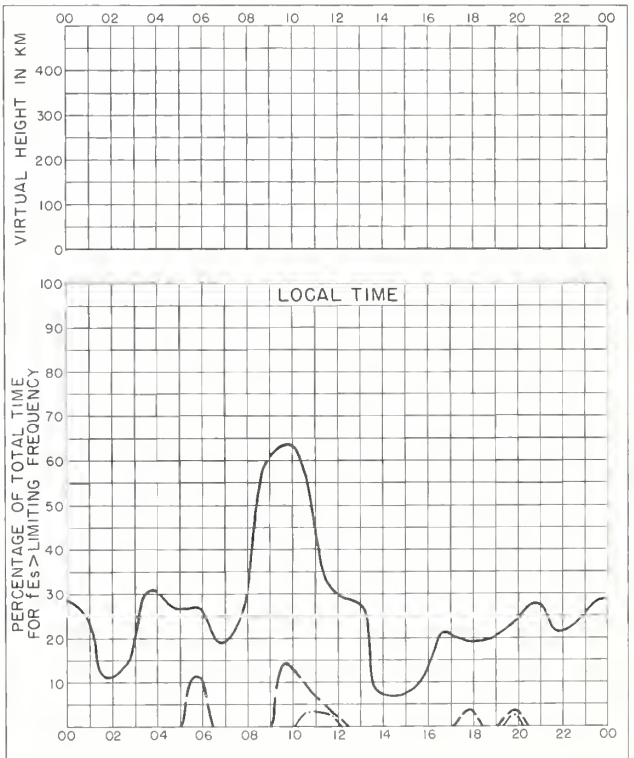


Fig. 128. PORT LOCKROY APRIL 1957

NBS 490

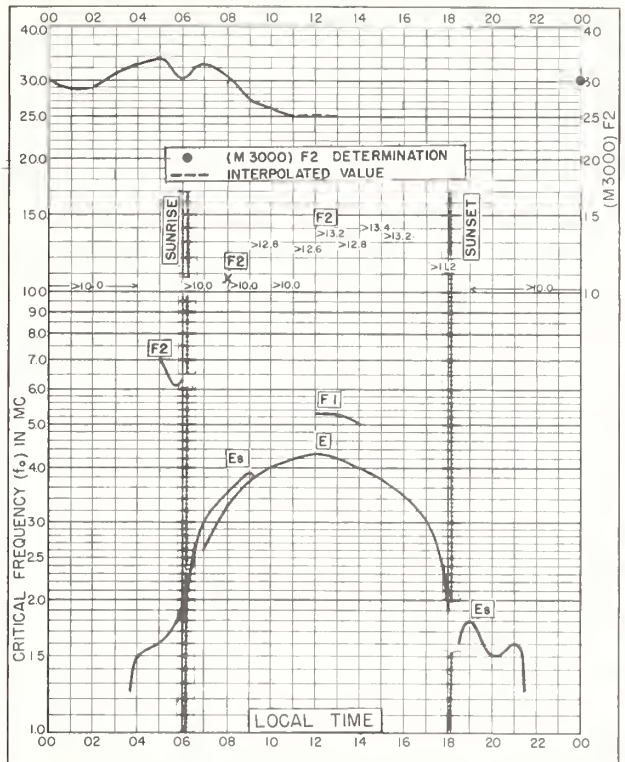


Fig. 129. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E MARCH 1957

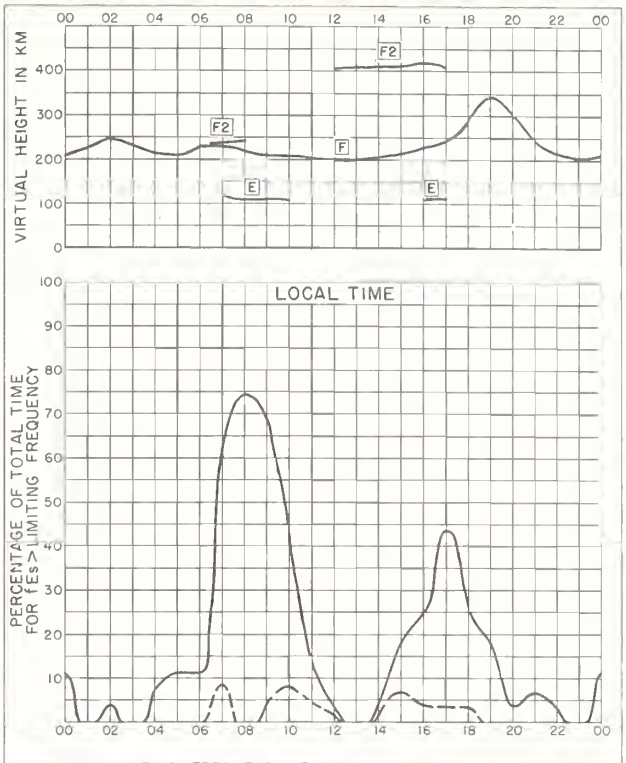


Fig. 130. LWIRO, BELGIAN CONGO MARCH 1957

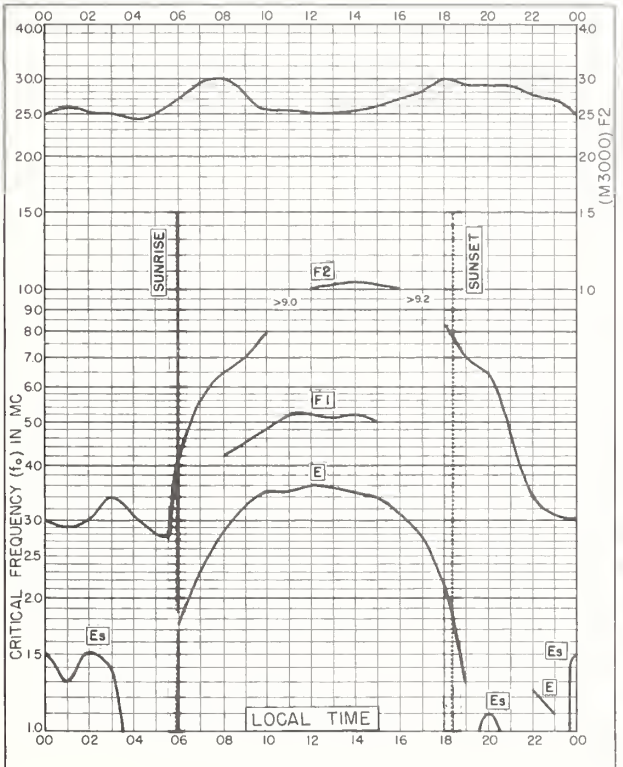


Fig. 131. KERGUELEN I.
49.4°S, 70.3°E MARCH 1957

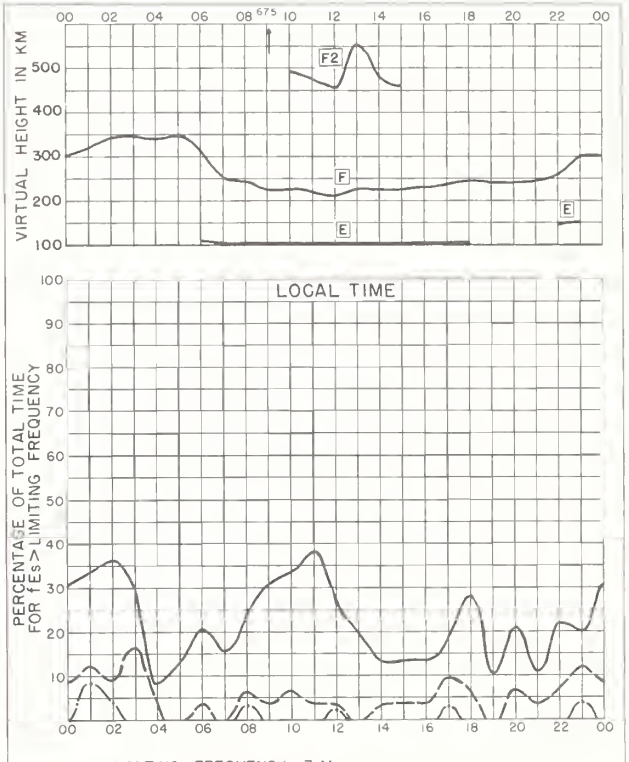


Fig. 132. KERGUELEN I. MARCH 1957

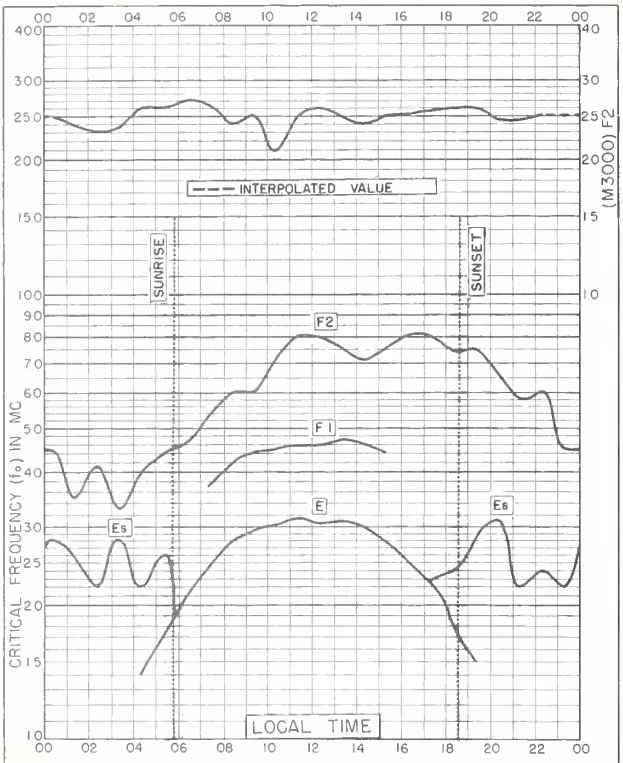


Fig. 133 TERRE ADELIE
66.7°S, 140.0°E MARCH 1957

NBS 503

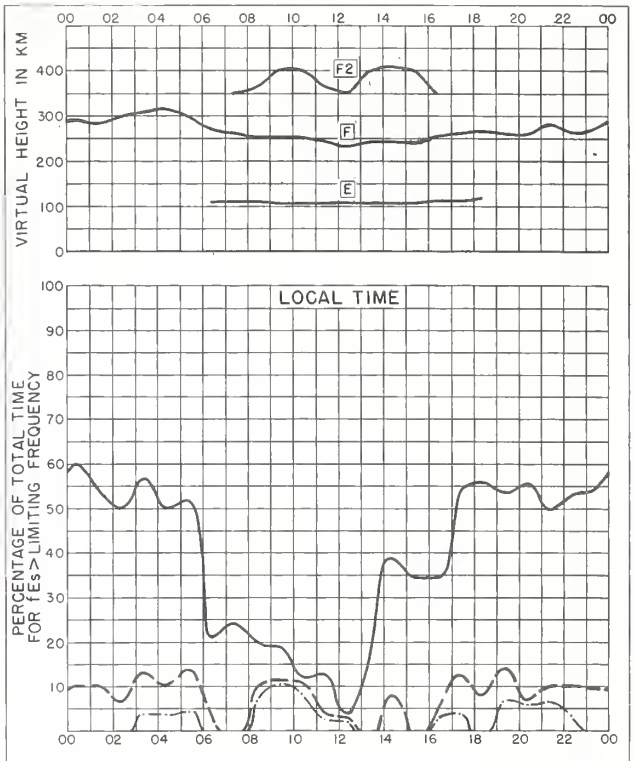


Fig. 134. TERRE ADELIE MARCH 1957

NBS 490

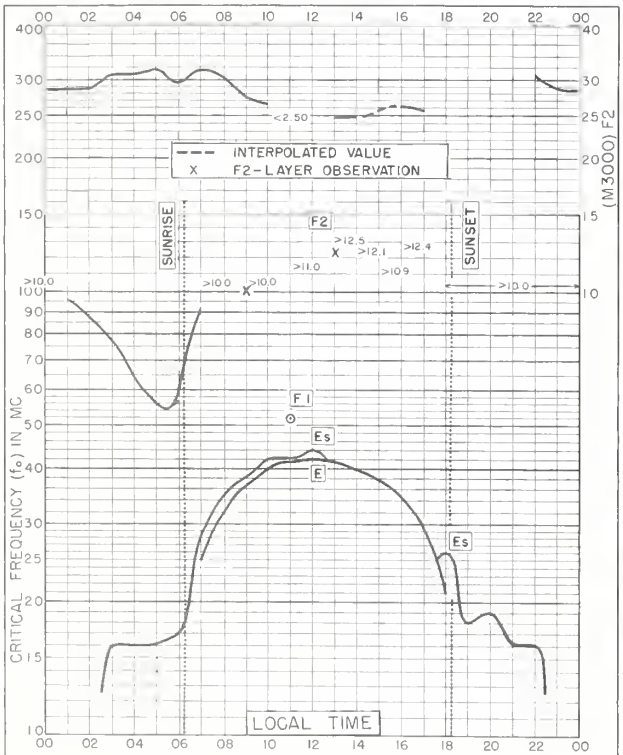


Fig. 135. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E FEBRUARY 1957

NBS 503

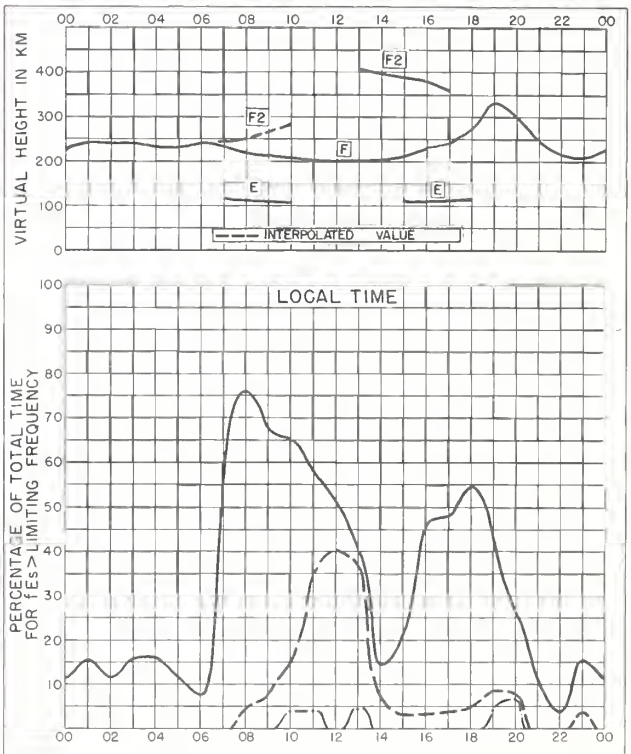


Fig. 136. LWIRO, BELGIAN CONGO FEBRUARY 1957

NBS 490

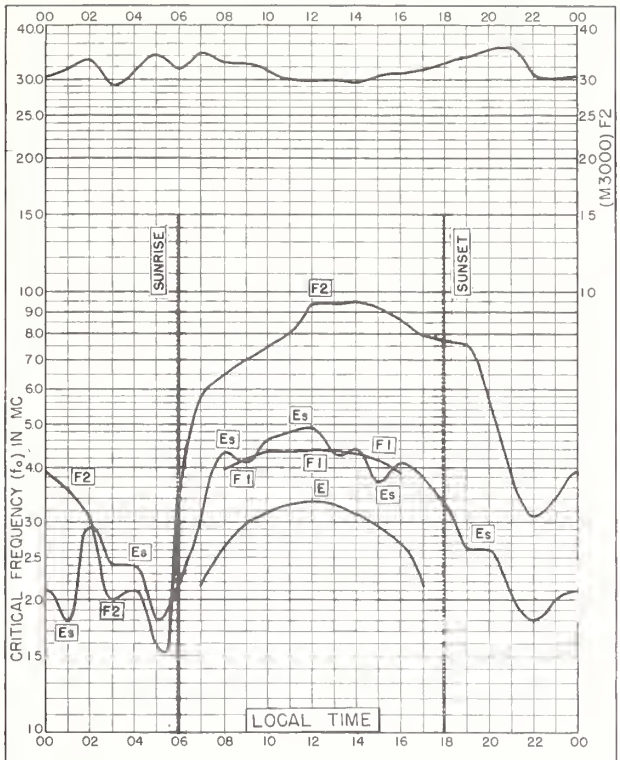


Fig. 137. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E MAY 1954

NBS 503

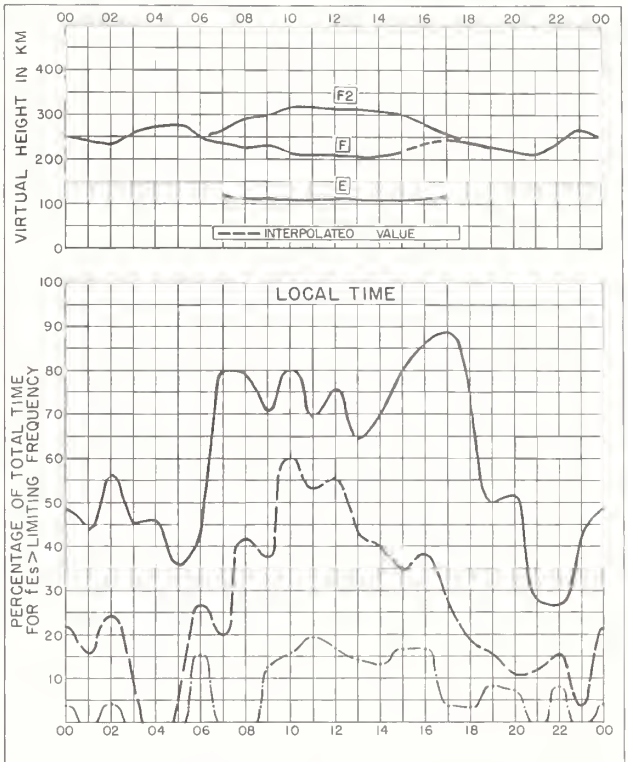


Fig. 138. LWIRO, BELGIAN CONGO MAY 1954

NBS 490

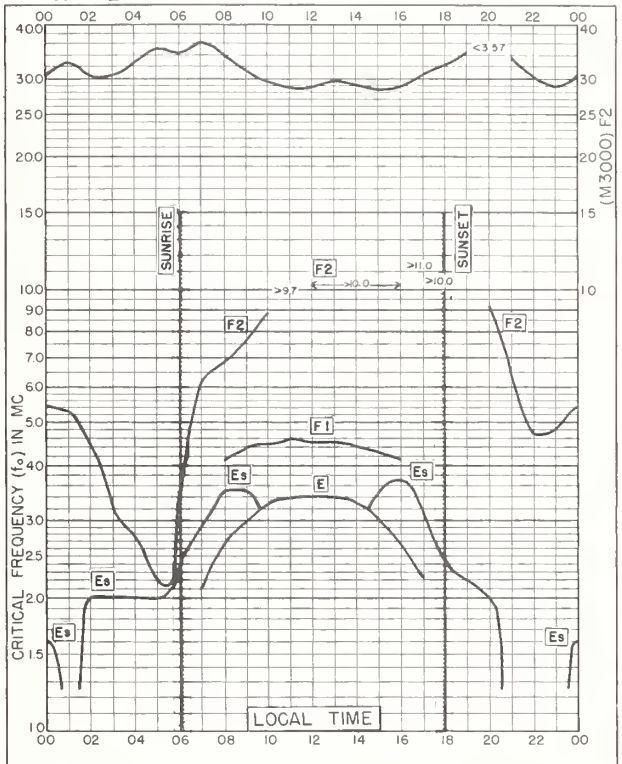


Fig. 139. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E APRIL 1954

NBS 503

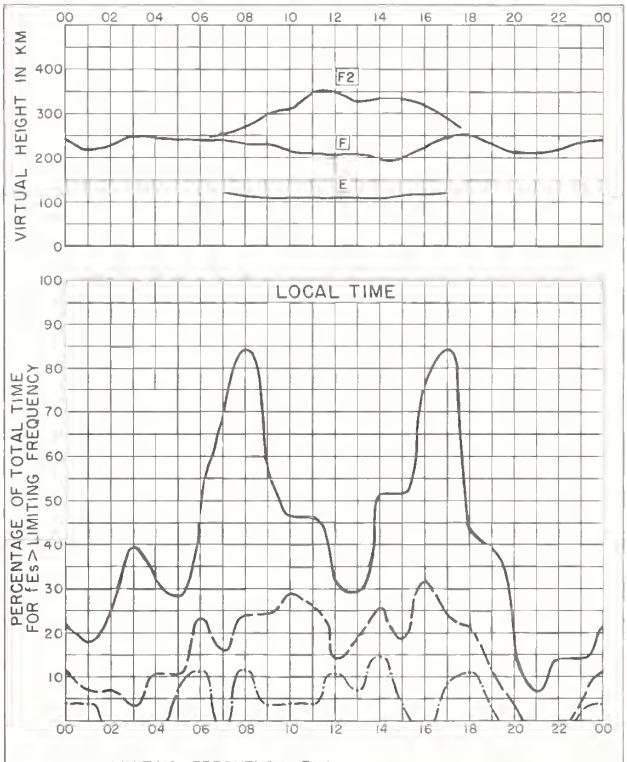


Fig. 140. LWIRO, BELGIAN CONGO APRIL 1954

NBS 490

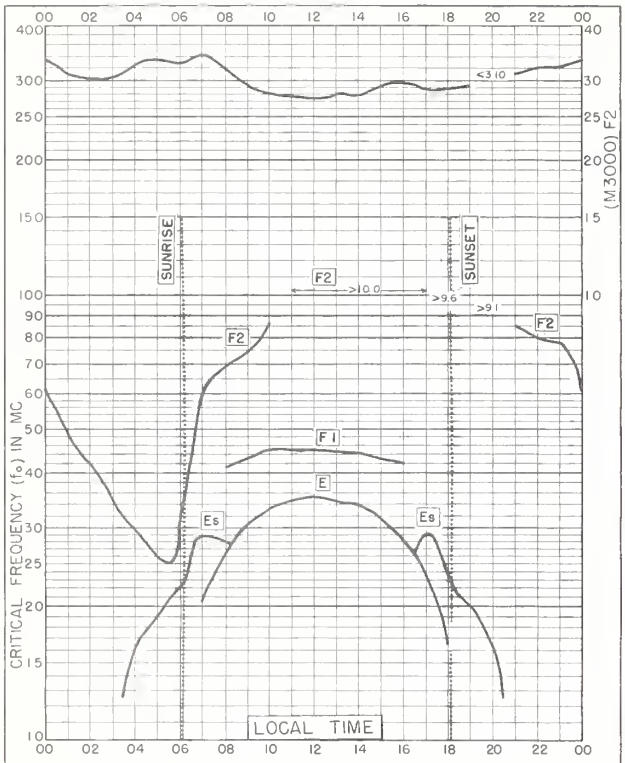


Fig. 141. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E MARCH 1954

NBS 503

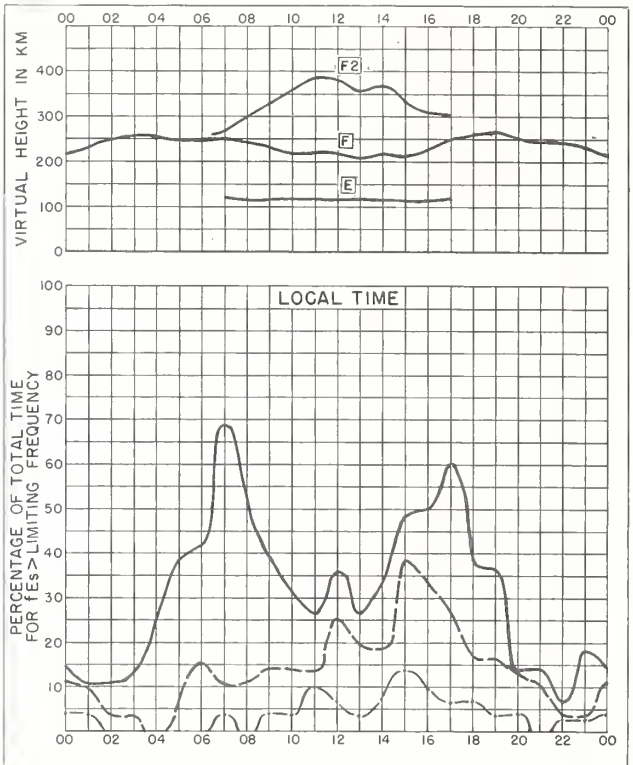


Fig. 142. LWIRO, BELGIAN CONGO MARCH 1954

NBS 490

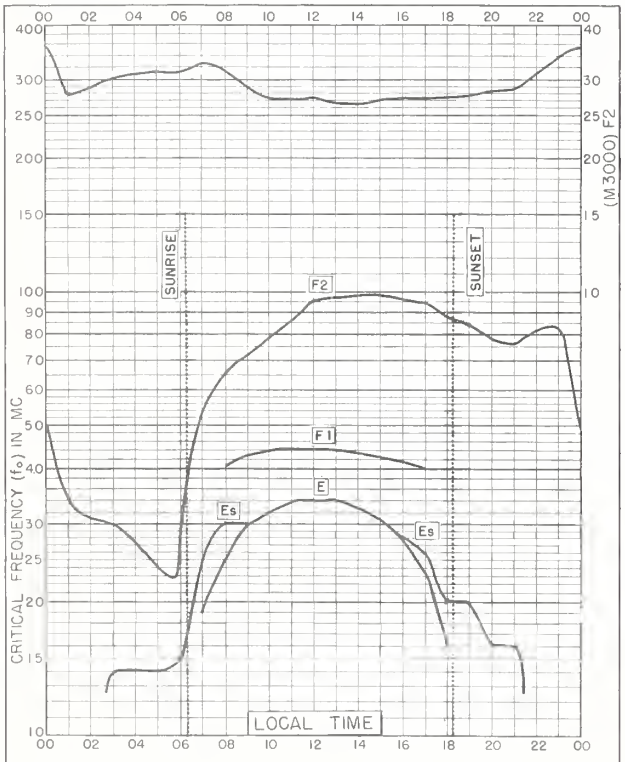


Fig. 143. LWIRO, BELGIAN CONGO
2.3°S, 28.8°E FEBRUARY 1954

NBS 503

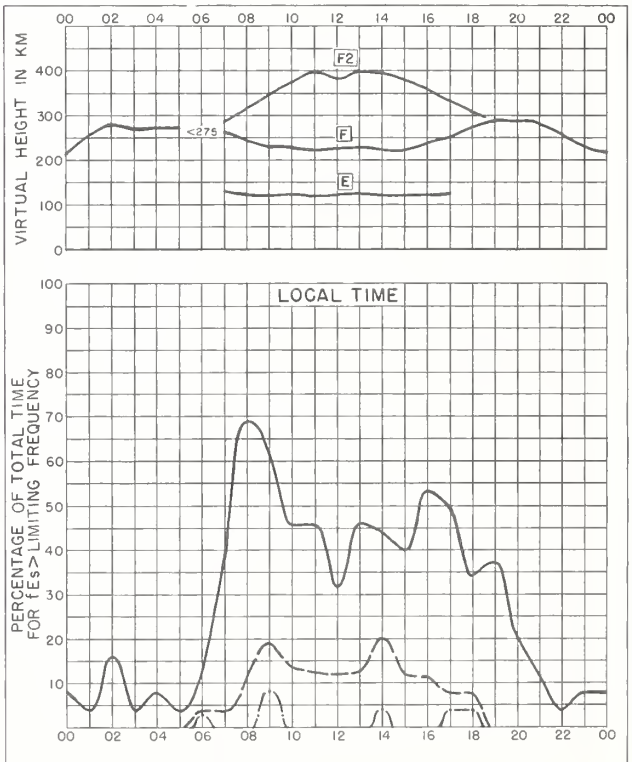


Fig. 144. LWIRO, BELGIAN CONGO FEBRUARY 1954

NBS 490

Index of Tables and Graphs of Ionospheric Data

in CRPL-F196 (Part A)

Index (CRPL-F196 (Part A), continued)

Index (CRPL-F196 (Part A), concluded)

The annual index is on the following pages, 52-54.

INDEX OF IONOSPHERIC DATA PUBLISHED IN 1960
(CRPL-F 185(A) THROUGH F 196(A))

The following index of tables and graphs of ionospheric data published in the CRPL-F(A) series in 1960 is divided into two parts. Part I is an index of data observed in 1959 and 1960. Part II is an index of data observed prior to 1959.

In general, both table and graphs for a given station for a given month appear in the same issue.

Annual indexes of ionospheric data published prior to 1960 are in IRPL-F17, CRPL-F28, -F40, -F52, -F64, -F76, -F88, -F100, -F112, -F124, -F136(A), -F148(A), -F160(A), -F172(A), and -F184(A).

PART I

Index of Tables and Graphs of Ionospheric Data Observed in 1959 and 1960

and Published in 1960 (CRPL-F185(A) through -F196(A))

Station	1959												1960											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	
Adak, Alaska							185	186	187	187	187	188	189	190	192	195	196							
Akita, Japan	185	186	186	187	188	188								193	194	195	196							
Anchorage, Alaska						185	186	186		187	187	188	189	189	190	195								
Baguio, P. I.						186		186	186	187	187	188	189	189	190									
Baker Lake, Canada		185																						
Bogota, Colombia			185				189	190	192	189	188	190												
Boulder, Colorado	189	189	189	189	189	189	189	187		188	188	189	189	189	192	194	193							
Brisbane, Australia			185	185	188	189		190	192			191			196									
Budapest, Hungary		193	189	185	188			190	193															
Buenos Aires, Argentina	192		194	195																				
Bunia, Belgian Congo	186	186	185	187	188	189		191	193				192	193	195	196	196							
Byrd Station	190	191	193	193	194					192														
Canberra, Austrlia	192	193	194	195	196		192																	
Cape Hallett	185																							
Capetown, Union of S. Africa			186	188	196																			
Christchurch, New Zealand	185																							
Churchill, Canada		185	187	187									192		195	195	196							
Concepcion, Chile	188	190	194							188	189	189												
Dakar, French W. Africa	193	193	194																					
De Bilt, Holland	185	185	187									191		193	194	195	196							
Djibouti, French Somaliland	192	193	194																					
Dourbes, Belgium	192	193	195	196																				
El Cerillo, Mexico[a]		193	194	195			191		191	191					194	196	196							
Elisabethville, Belgian Congo	186	186	185	187	188	189	191	191	193				192	193	195	196	196							
Eureka, Canada	192																							
Fairbanks, Alaska							185	185	187	187	188	188	189	190	190	194								
Falkland Is.	185	185	186	186	188	188	191		191	193	193				194	195	196							
Formosa, China	186	186	186	188	189	191	193	190							194	195								
Ft. Monmouth, New Jersey						185	185	186	186	187	187	187	189	189	193	195								
Freiburg, Germany	192	192																						
Frobisher, Canada	192																							
Genoa (Monte Capellino), Italy. See Monte Capellino, Italy.	192	185	185	187	189								196	193	194	195	196							
Godhavn, Greenland						185	186	186	187	188														
Grahamstown, Union of S. Africa	192																							
Grand Bahama I.						185	185	186	187	188	189	189	191	191	193									
Graz, Austria	186	186	186	186											194									
Hobart, Tasmania			185																					
Huancayo, Peru						185	186	186	186	187	187	188	190	190	191	193	194	195	196					
Ibadan, Nigeria	185	185	185	187	188	189	190																	
Inverness, Scotland	185	185[b]	186									191	192		194	195	196							
Johannesburg, Union of S. Africa			186	188																				
Juliaca, Peru			186		187																			
Juliusruh/Rügen, Germany	192	193	194	195	196																			
Kiruna, Sweden			185		188	190		190						193	194	195	196							
La Paz, Bolivia													190	193										

PART I (CONCLUDED)

Station	1959												1960											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	
Leopoldville, Belgian Congo	186	186	186	187	188	189	191	191	193				192	193	195	196	196							
Lindau/Harz, Germany	192	193	194	195						194														
Lulea, Sweden	185	185	185	187	188	189	190	190	192	191		194	192	193	194	195	196							
Lwiro, Belgian Congo	186		186	186	191	190		191	191				192				196							
Lycksele, Sweden	185	185	185	185	188		192	191		191					194	195	196							
Macau		185									193													
Maui, Hawaii							185	186	187	187	187	188	189	189	192	195								
Meanook, Canada	192																							
Monte Capellino, Italy. See Genoa (Monte Capellino), Italy	192	185	185	187	189								196	193	194	195	196							
Moscow, U.S.S.R.	186	186			188			191	191					194		196								
Mundaring, W. Australia													192											
Narsarssuak, Greenland						185	186	186	187	188	188	188	192	191										
Natal, Brazil	189									193	190	196												
Nurmijarvi, Finland	185	186	185	186	188		190	192	191		194	193		193	194	195	196							
Okinawa I.						185	186	186	186	187	187	187	189	191										
Oslo, Norway	185																							
Ottawa, Canada	185	185	185										192	193	195	195	196							
Point Barrow, Alaska								186	187	187	187	188	189	189	190	195	196							
Pole Station	193	193	193	193	195	195	196	196	196	196	191	191	191											
Port Lockroy	192																							
Providenie Bay, U.S.S.R.							191																	
Pruhonice, Czechoslovakia				196																				
Resolute Bay, Canada		185		188								191	192	193	195	195	196							
Reykjavik, Iceland						185	186	186	187	187	188	189	189											
Rome, Italy		186	186	186	188		190	190	192			196		193	194	196	196							
St. John's, Newfoundland													192		195	195	196							
San Salvador I.	188																							
Sao Paulo, Brazil	192	193	194	195																				
Schwarzenburg, Switzerland See Sottens.			186				190						192	193	194	195	196							
Simferopol, U.S.S.R.					191	191	191																	
Singapore, British Malaya			185	187	188	187	190	191	191						194	195	196							
Slough, England			186		188	190						191	192		194	195	196							
Sodankyla, Finland	185	186	185	187	188	191	192	190			194	192		193	194	195	196							
Sottens, Switzerland See Schwarzenburg.			186				190						192	193	194	195	196							
Svalbard, Norway	192		194	195	196																			
Tahiti, Society Is.	193	193	194																					
Talara, Peru					186		186	187	187	187	188	188	191	191	193	194	195	196						
Tananarive, Madagascar	192	193	194																					
Thule, Greenland							186	186	187	188	187	188	190	191	194	193								
Tokyo, Japan	185	185	185	187	188	188								193	194	195	196							
Townsville, Australia					190	190	190	190	192															
Trelew, Argentina		193	194	196	196																			
Tromso, Norway			187		188	190	190	190	192					193	194	195								
Tucuman, Argentina			194																					
Upsala, Sweden	188		185	185	189		190	191						193	194	196	196							
Ushuaia, Argentina	192	193																						
Victoria, Canada	192																							
Wakkanai, Japan	185	185	185	187	188	188								193	194	195	196							
Washington, D. C.								186	186	187	187	188	189	189	191	191	194	194	196					
Watheroo, W. Australia	185																							
White Sands, New Mexico						185	187	186	187	187	188	189	189	191	193	193								
Winnipeg, Canada	188		185										192	193	195	195	196							
Yamagawa, Japan	185	185	186	187	188	188								193	194	195	196							
Yellowknife, Canada	192																							

[a]See Erratum 1 in CRPL-F186(A), p. vii, concerning reporting time of data for November and December 1958, and January 1959.

[b]See Erratum 2 in CRPL-F186(A), p. vii, concerning graph of h'E for February 1959.

Part II of this Index is on following page.

PART II

Index of Tables and Graphs of Ionospheric Data Observed Prior to 1959 and Published in 1960 (CRPL-F185(A) through -F196(A))

Station	1958												1957											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	D
Ahmedabad, India		191																						
Alert, Canada	190	190	190	191							194	194								191				
Bangui, French Equatorial Africa		194	194																					
Bombay, India		191																						
Boulder, Colorado											187	187												
Budapest, Hungary								191									188							
Buenos Aires, Argentina	189	189		190	189	190	190	190				191												
Byrd Station										188	188	189												
Calcutta, India		191																						
Cape Canaveral, Florida			188	189	189	189		190	187	189	189	189												
Casablanca, Morocco	196																							
Chiclayo, Peru												185												
Clyde River, Canada		194	194																					
Concepcion, Chile						189		186	187	188	188	188												
Dakar, French W. Africa	195	193	195																					
Decepcion I.			195	195																				
Delhi, India		191																						
Djibouti, French Somaliland	195	195	195																					
Dourbes, Belgium				195																				
Eureka, Canada	192	193	194								196	195												
Freiburg, Germany	192	193		195			189									190	190	190						
Frobisher, Canada												195												
Grahamstown, Union of S. Africa								192	189															
Graz, Austria			187																					
Hobart, Tasmania					192				190															
Hollandia, Netherlands New Guinea	194	194	194	196																				
Ibadan, Nigeria									191			191												
Juliusruh/Rügen, Germany		192																						
Kerguelen I.														196										
Kodaikanal, India		191																						
La Paz, Bolivia												186												
La Quiaca, Argentina						190	192	191	192															
Lindau/Harz, Germany								190																
Little America									185															
Lulea, Sweden	190	193	190		190	190	190									196							192	
Lwiro, Belgian Congo	189	190					190	194	194	194	194	194	192	196	196	196			189	189	189			
Madras, India		191																						
Meanook, Canada	190	193	190					196	194			193												
Natal, Brazil										189	185	188												
Nurmijarvi, Finland								190									187	187						
Paramaribo, Surinam	192	193	194	195																				
Poitiers, France	195	194	195																					
Pole Station											190	191												
Port Lockroy	189	189	189	195								191				196	195	195			189	190	189	190
Rabat, Morocco		193	195																					
San Salvador I.											188	188												
Sao Paulo, Brazil						192	192	194																
Singapore, British Malaya	191	191	189																				187	189
Svalboard, Norway	192	192		190	191	190	190	196																
Tahiti, Society Is.	195	193	195																					
Tamanrasset, French W. Africa		193	195																					
Tananarive, Madagascar	195	194	195																					
Terre Adelie														196										
Tiruchy, India		191																						
Townsville, Australia								190																
Trelew, Argentina				194			192	191	191															
Trivandrum, India		191																						
Tsumeb, South W. Africa		195	194																					
Tucuman, Argentina		189		190			192	192	192															
Ushuaia, Argentina		193	191				192		192															
Victoria, Canada												191												
Watheroo, W. Australia				187																				
Yellowknife, Canada			194								192	193												

Station	1956												1955											
	J	F	M	A	M	J	Jy	A	S	O	N	D	J	F	M	A	M	J	Jy	A	S	O	N	D
Budapest, Hungary										190														
Campbell I.			188																					
Freiburg, Germany							188	188	188															
Kerguelen I.	187	187	187	187	187	187																		
Nha-Trang, Indochina	186	186	186	186																				

	1954												1953											
Lulea, Sweden													192											
Lwiro, Belgian Congo			196	196	196	196																		

CRPL Reports

[A detailed list of CRPL publications is available from the Central Radio Propagation Laboratory upon request]

Daily:

Radio disturbance forecasts, every half hour from broadcast stations WWV and WWVH of the National Bureau of Standards.

Telephoned and telegraphed reports of ionospheric, solar, geomagnetic, and radio propagation data.

Weekly:

CRPL—J. North Atlantic Radio Propagation Forecast.

CRPL—Jp. North Pacific Radio Propagation Forecast.

Semimonthly:

CRPL—Ja. Semimonthly Frequency Revision Factors For CRPL Basic Radio Propagation Prediction Reports.

Monthly:

CRPL—D. Basic Radio Propagation Predictions—Three months in advance. (Dept. of the Army, TB 11—499—, monthly supplements to TM 11—499; Dept. of the Air Force, TO 31—3—28 series). On sale by Superintendent of Documents. Members of the Armed Forces should address cognizant military office.

CRPL—F. (Part A). Ionospheric Data.
(Part B). Solar-Geophysical Data.
Limited distribution. These publications are in general disseminated only to those individuals or scientific organizations which collaborate in the exchange of ionospheric, solar, geomagnetic, or other radio propagation data.

Catalog of Data:

A catalog of records and data on file at the U. S. IGY World Data Center A for Airglow and Ionosphere, Boulder Laboratories, National Bureau of Standards, which includes a fee schedule to cover the cost of supplying copies, is available upon request.

The publications listed above may be obtained without charge from the Central Radio Propagation Laboratory, National Bureau of Standards, Boulder Laboratories, Boulder, Colorado, unless otherwise indicated. Please note that the F series is not generally available.

Circulars of the National Bureau of Standards pertaining to Radio Sky Wave Transmission:

NBS Circular 462. Ionospheric Radio Propagation. $1.25.

NBS Circular 465. Instructions for the Use of Basic Radio Propagation Predictions. 30 cents.

NBS Circular 557. Worldwide Radio Noise Levels Expected in the Frequency Band 10 Kilocycles to 100 Megacycles. 30 cents.

NBS Circular 582. Worldwide Occurrence of Sporadic *E*. $3.25.

These Circulars are on sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Members of the Armed Forces should address the respective military office having cognizance of radio wave propagation.

Selected Technical Notes of the National Bureau of Standards:

NBS Tech. Note 2. PB151361. World Maps of F2 Critical Frequencies and Maximum Usable Frequency Factors. $3.50.

NBS Tech. Note 13. PB151372. Technical Considerations Leading to an Optimum Allocation of Radio Frequencies in the Band 25 to 60 Mc. $2.50.

NBS Tech. Note 18. PB151377. Radio Noise Data for the IGY. $2.50.

18–2. PB151377–2. Quarterly Radio Noise Data (Mar.-May 1959). $1.00.

18–3. PB151377–3. (June-Aug. 1959). $1.00.

18–4. PB151377–4. (Sept.-Nov. 1959). $1.50.

NBS Tech. Note 31. PB151390. An Atlas of Oblique-Incidence Ionograms. $2.25.

NBS Tech. Note 40–1. PB151399–1. Mean Electron Density Variations of the Quiet Ionosphere, 1: March 1959. $1.25.

40–2. PB151399–2. 2: April 1959. $1.25.

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